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In this issue

The President's message

The blind child in school

FEBRUARY–MARCH 1961

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Speaking for S. 1021 . . .

THE NEXT DECADE holds no promise of lessened impact upon our resources available for support of education. Enrollments in public elementary and secondary schools will increase from 36 million in 1959–60 to 44 million in 1968–69. These increases in enrollment will require an additional 437,000 in instructional staff and 600,000 new classrooms by the end of the 10-year period. Of more striking importance, however, is the fact that greatest pressure will be placed upon us during the next 5 years. We cannot afford, in my judgment, to permit any of our children to go even 1 year longer than necessary without adequate instructional staff and classroom facilities.

We are therefore proposing in S. 1021 a measure which is designed especially to focus on the problem of providing adequately for the teaching profession and for the necessary facilities for public elementary and secondary school programs, with additional emphasis upon certain special and unique problems.

We are suggesting that the States themselves be authorized to decide in what proportion they desire to utilize the proposed Federal financial assistance for teachers' salaries or for classroom construction. We believe that the States are the best judges of the degree and incidence of educational need within their borders. For example, the State which has already made substantial progress in meeting its construction needs can turn to the problem of increasing the salaries of members of its public school instructional staff. Another State which has not yet surmounted the problem of constructing adequate classrooms may, while giving early emphasis to meeting these needs, also use a share of its allotment to increase the salaries of teachers.

Secretary Ribicoff, speaking before the Subcommittee on Education of the Committee on Labor and Public Welfare, U.S. Senate, on March 8, 1961.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • ABRAHAM A. RIBICOFF, *Secretary*

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The President's Message on Education

To the Congress of the United States, February 20, 1961

OUR PROGRESS AS A NATION can be no swifter than our progress in education. Our requirements for world leadership, our hopes for economic growth, and the demands of citizenship itself in an era such as this all require the maximum development of every young American's capacity.

The human mind is our fundamental resource. A balanced Federal program must go well beyond incentives for investment in plant and equipment. It must include equally determined measures to invest in human beings—both in their basic education and training and in their more advanced preparation for pro-

fessional work. Without such measures, the Federal Government will not be carrying out its responsibilities for expanding the base of our economic and military strength.

Our progress in education over the last generation has been substantial. We are educating a greater proportion of our youth to a higher degree of competency than any other country on earth. One-fourth of our total population is enrolled in our schools and colleges. This year $26 billion will be spent on education alone.

But the needs of the next generation—the needs of the next decade and the next school year—will not be met at this level of effort. More effort will be required—on the part of students, teachers, schools, colleges, and all 50 States—and on the part of the Federal Government.

Education must remain a matter of State and local control, and higher education a matter of individual choice. But education is increasingly expensive. Too many State and local governments lack the resources to assure an adequate education for every child. Too many classrooms are overcrowded. Too many teachers are underpaid. Too many talented individuals cannot afford the benefits of higher education. Too many academic institutions cannot afford the cost of, or find room for, the growing numbers of students seeking admission in the sixties.

Our twin goals must be: A new standard of excellence in education—and the availability of such excellence to all who are willing and able to pursue it.

I. Assistance to public elementary and secondary schools

A successful educational system requires the proper balance, in terms of both quality and quantity, of three elements: students, teachers, and facilities. The quality of the students depends in large measure on both the quality and the relative quantity of teachers and facilities.

Throughout the 1960's there will be no lack in the quantity of students. An average net gain of nearly 1 million pupils a year during the next 10 years will overburden a school system already strained by well over a half million pupils in curtailed or half-day sessions, a school system financed largely by a property tax incapable of bearing such an increased load in most communities.

But providing the quality and quantity of teachers and facilities to meet this demand will be major problems. Even today, there are some 90,000 teachers who fall short of full certification standards. Tens of thousands of others must attempt to cope with classes of unwieldy size because there are insufficient teachers available.

We cannot obtain more and better teachers—and our children should have the best—unless steps are taken to increase teachers' salaries. At present salary levels, the classroom cannot compete in financial rewards with other professional work that requires similar academic background.

It is equally clear that we do not have enough classrooms. In order to meet current needs and accommodate increasing enrollments, if every child is to have the opportunity of a full-day education in an adequate classroom, a total of 600,000 classrooms must be constructed during the next 10 years.

These problems are common to all States. They are particularly severe in those States which lack the financial resources to provide a better education, regardless of their own efforts. Additional difficulties, too often overlooked, are encountered in areas of special educational need, where economic or social circumstances impose special burdens and opportunities on the public school. These areas of special educational need include our depressed areas of chronic unemployment and the slum neighborhoods of our larger cities, where underprivileged children are overcrowded into substandard housing. A recent survey of a very large elementary school in one of our major cities, for example, found 91 percent of the children coming to class with poor diets, 87 percent in need of dental care, 21 percent in need of visual correction, and 19 percent with speech disorders. In some depressed areas roughly one-third of the children must rely on surplus foods for their basic sustenance. Older pupils in these schools lack proper recreational and job guidance. The proportion of dropouts, delinquency, and classroom disorders in such areas is alarmingly high.

I recommend to the Congress a 3-year program of general Federal assistance for public elementary and secondary classroom construction and teachers' salaries.

Based essentially on the bill which passed the Senate last year (S. 8), although beginning at a more modest level of expenditures, this program would assure every State of no less than $15 for every public school student in average daily attendance, with the total amount appropriated ($666 million being authorized in the first year, rising to $866 million over a 3-year period) distributed according to the equalization formula contained in the last year's Senate bill, and already familiar to the Congress by virtue of its similarity to the formulas contained in the Hill-Burton Hospital Construction and other acts. Ten percent of the funds allocated to each State in the first year, and an equal amount thereafter, is to be used to help meet the unique problems of each State's "areas of special educational need"—depressed areas, slum neighborhoods, and others.

This is a modest program with ambitious goals. The sums involved are relatively small when we think in terms of more than 36 million public school children, and the

billions of dollars necessary to educate them properly. Nevertheless, a limited beginning now—consistent with our obligations in other areas of responsibility—will encourage all States to expand their facilities to meet the increasing demand and enrich the quality of education offered, and gradually assist our relatively low-income States in the elevation of their educational standards to a national level.

The bill which will follow this message has been carefully drawn to eliminate disproportionately large or small inequities, and to make the maximum use of a limited number of dollars. In accordance with the clear prohibition of the Constitution, no elementary or secondary school funds are allocated for constructing church schools or paying church school teachers' salaries; and thus nonpublic school children are rightfully not counted in determining the funds each State will receive for its public schools. Each State will be expected to maintain its own effort or contribution; and every State whose effort is below the national average will be expected to increase that proportion of its income which is devoted to public elementary and secondary education.

This investment will pay rich dividends in the years ahead—in increased economic growth, in enlightened citizens, in national excellence. For some 40 years the Congress has wrestled with this problem and searched for a workable solution. I believe that we now have such a solution; and that this Congress in this year will make a landmark contribution to American education.

II. Construction of college and university facilities

Our colleges and universities represent our ultimate educational resource. In these institutions are produced the leaders and other trained persons whom we need to carry forward our highly developed civilization. If the colleges and universities fail to do their job, there is no substitute to fulfill their responsibility. The threat of opposing military and ideological forces in the world lends urgency to their task. But that task would exist in any case.

The burden of increased enrollments—imposed upon our elementary and secondary schools already in the fifties—will fall heavily upon our colleges and universities during the sixties. By the autumn of 1966, an estimated 1 million more students will be in attendance at institutions of higher learning than enrolled last fall—for a total more than twice as high as the total college enrollment of 1950. Our colleges, already hard pressed to meet rising enrollments since 1950 during a period of rising costs, will be in critical straits merely to provide the necessary facilities, much less the cost of quality education.

The country as a whole is already spending nearly $1 billion a year on academic and residential facilities for higher education—some 20 percent of the total spent for higher education. Even with increased contributions from State, local, and private sources, a gap of $2.9 billion between aggregate needs and expenditures is anticipated by 1965, and a gap of $5.2 billion by 1970.

The national interest requires an educational system on the college level sufficiently financed and equipped to provide every student with adequate physical facilities to meet his instructional, research, and residential needs.

I therefore recommend legislation which will—

(1) *Extend the current college housing loan program with a 5-year $250 million a year program designed to meet the Federal Government's appropriate share of residential housing for students and faculty. As a start, additional lending authority is necessary to speed action during fiscal 1961 on approvable loan applications already at hand.*

(2) *Establish a new, though similar, long-term, low-interest rate loan program for academic facilities, authorizing $300 million in loans each year for 5 years to assist in the construction of classrooms, laboratories, libraries, and related structures—sufficient to enable public and private higher institutions to accommodate the expanding enrollments they anticipate over the next 5 years; and also to assist in the renovation, rehabilitation, and modernization of such facilities.*

III. Assistance to college and university students

This Nation a century or so ago established as a basic objective the provision of a good elementary and secondary school education to every child, regardless of means. In 1961, patterns of occupation, citizenship, and world affairs have so changed that we must set a higher goal. We must assure ourselves that every talented young person who has the ability to pursue a program of higher education will be able to do so if he chooses, regardless of his financial means.

Today private and public scholarship and loan programs established by numerous States, private sources, and the student loan program under the National Defense Education Act are making substantial contributions to the financial needs of many who attend our colleges. But they still fall short of doing the job that must be done. An estimated one-third of our brightest high school graduates are unable to go on to college, principally for financial reasons.

While I shall subsequently ask the Congress to amend and expand the student loan and other provisions of the National Defense Education Act, it is clear that even with this program many talented but needy students are unable

to assume further indebtedness in order to continue their education.

I therefore recommend the establishment of a 5-year program with an initial authorization of $26,250,000 of State-administered scholarships for talented and needy young people which will supplement but not supplant those programs of financial assistance to students which are now in operation.

Funds would be allocated to the States during the first year for a total of 25,000 scholarships averaging $700 each, 37,500 scholarships the second year, and 50,000 for each succeeding year thereafter. These scholarships, which would range according to need up to a maximum stipend of $1,000, would be open to all young persons, without regard to sex, race, creed, or color, solely on the basis of their ability—as determined on a competitive basis—and their financial need. They would be permitted to attend the college of their choice, and free to select their own program of study. Inasmuch as tuition and fees do not normally cover the institution's actual expenses in educating the student, additional allowances to the college or university attended should accompany each scholarship to enable these institutions to accept the additional students without charging an undue increase in fees or suffering an undue financial loss.

IV. Vocational education

The National Vocational Education Acts, first enacted by the Congress in 1917 and subsequently amended, have provided a program of training for industry, agriculture, and other occupational areas. The basic purpose of our vocational education effort is sound and sufficiently broad to provide a basis for meeting future needs. However, the technological changes which have occurred in all occupations call for a review and reevaluation of these acts, with a view toward their modernization.

To that end, *I am requesting the Secretary of Health, Education, and Welfare to convene an advisory body drawn from the educational profession, labor-industry, and agriculture, as well as the lay public, together with representation from the Departments of Agriculture and Labor, to be charged with the responsibility of reviewing and evaluating the current National Vocational Education Acts and making recommendations for improving and redirecting the program.*

Conclusion

These stimulatory measures represent an essential though modest contribution which the Federal Government must make to American education at every level. One-sided aid is not enough. We must give attention to both teachers' salaries and classrooms, both college academic facilities and dormitories, both scholarships and loans, both vocational and general education.

We do not undertake to meet our growing educational problems merely to compare our achievements with those of our adversaries. These measures are justified on their own merits—in times of peace as well as peril—to educate better citizens as well as better scientists and soldiers. The Federal Government's responsibility in this area has been established since the earliest days of the Republic—it is time now to act decisively to fulfill that responsibility for the sixties.

—JOHN F. KENNEDY

A SHORT HISTORY OF FEDERAL AID TO EDUCATION

Ever since this Nation began, the Federal Government has been giving assistance of one kind or another for the education of its people. Among the several enactments which have expressed the sense of Federal responsibility, the following are particularly notable:

The Survey Ordinance of 1785 provided that, from the public lands west of the thirteen colonies, one lot in every township should be dedicated to the maintenance of public schools.

The Northwest Ordinance of 1787 declared that "schools and the means of education shall be forever encouraged."

The Morrill Act of July 2, 1862, set aside public land for each State to maintain at least one college for promoting "the liberal and practical education of the industrial classes."

The Vocational Education Act of 1917 (the Smith-Hughes Act) was the first step in a long program of Federal assistance to vocational education of less-than-college grade.

The G.I. Bill for World War II veterans and the Korean GI Bill both bestowed educational benefits.

Public Laws 815 and 874 by the 81st Congress, September 1950, provided funds to help individual school districts build and operate schools for the children of people connected with Federal activity.

The National Defense Education Act, September 1958, authorized more than a billion dollars for a dozen separate programs of assistance to schools, colleges, and students.

The Blind Child in School

JOHN WALKER JONES

LIKE MOST PARENTS, the parents of a blind child want him to have a normal and happy childhood, to receive a good education, and, when possible, to grow up in his own home. In recent years many parents of blind children have worked willingly and effectively with school administrators, special educators, and local officials to aid in the development of suitable educational facilities for these children in their home communities. Between 1948 and 1958 the number of public day-school systems providing programs for blind children increased ten times. More than half of those being educated in local public schools were able with the help of skilled specialists to spend a considerable part of each day in regular classrooms with seeing children and regular teachers.

During those years more and more local public school administrators across the country were challenged to provide educational opportunities for a growing number of blind children. At first some local educators took up the challenge cautiously, others with open skepticism. Both their caution and their skepticism are understandable, for the challenge came during a period when heavy demands were being made on all phases of education. With school populations soaring, administrators were finding it increasingly difficult to provide teachers and buildings for the average child—let alone for the blind child. Furthermore in the early stages some of them thought of the new programs as experimental. But as they gained experience in the day-school programs, more and more educators came to realize that the blind child is, as the specialists have said, "first of all a child, and secondly a child with a handicap." When through their experience they learned that his most basic needs were the same as those of seeing children, their anxiety over working with the unknown was relieved.

Once convinced that general education could and, when possible, should contribute to the blind child's education, educators began in earnest to work out plans that would supplement the full-time special class and residential school programs already in existence. Two relatively new plans were developed.

Under the first plan, some districts with enough blind children to justify employing full-time special teachers set up resource rooms in centrally located school buildings to which the blind child could go from his regular classroom to get special instruction and to use educational aids for the blind. Under the second plan, some districts placed children in regular classes for part of the day and brought in itinerant special teachers to work with them the other part.

By using combinations and modifications of these basic plans, some communities have created highly flexible programs in which the blind child can be transferred easily to the particular plan best suited to his needs at any given time. In some communities residential schools and local schools with special programs transfer pupils from one facility to another and share in planning each child's educa-

Mr. Jones joined the staff of the Section on Exceptional Children and Youth in the Office of Education in October of 1959 in the newly created position of specialist in the education of visually handicapped children. He came to the Office from Oregon, where he was consultant to the State Department of Education on the education of visually handicapped children and field representative of the State School for the Blind.

tional program. Others have developed cooperative arrangements to enable some blind children to enroll in residential schools as day students, join local youth organizations, and attend some classes with seeing children.

All along special teachers and special materials have been in short supply. Some residential and local school systems have helped relieve the situation by jointly sponsoring inservice workshops for teachers and combining their efforts to recruit and train transcribers of braille books. Parents of blind children often have assumed more than their share of responsibility in establishing and providing for these schools programs. For example, some have raised funds, among themselves and from local organizations, for school equipment and educational aids and for scholarships for teachers who want to qualify for work with blind children. Others have studied braille and organized or helped organize groups of volunteer transcribers so that blind children might have textbooks in braille matching those of their classmates. As resourceful parents and educators have found solutions to many of their problems, many communities have established or expanded local school programs.

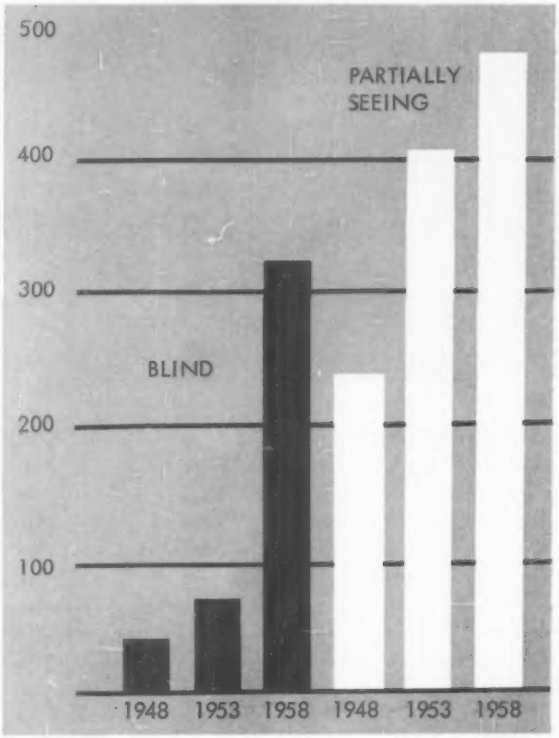
There are many reasons for the surge in the number of local school programs for blind children in addition to those of parental interest and support. They include the following:

1. Marked increase in the incidence of blindness among infants.
2. General rise in school-age population.
3. Difficulties of residential schools in expanding facilities to serve a large number of children.
4. Better means of locating and reporting blind children.
5. General trend toward treating and educating ill and handicapped persons in or near their homes rather than in large centralized institutions.

Of all these reasons, the higher incidence of blindness is surely the strongest. For the first time many school districts have found themselves with enough blind children to warrant employing specially prepared teachers. Until the middle of the century the incidence of visually disabling conditions in the school population had been low, particularly since the turn of the century, when preventive measures all but removed ophthalmia neonatorum as a cause of blindness.

In 1942, however, a new eye condition was reported—retrolental fibroplasia, which affected prematurely born infants. At first only a few cases were discovered, but soon steadily increasing numbers were reported from all parts of the United States and many parts of the world. By 1955, when medical research isolated the major cause as the administration of high concentrations of oxygen to

Chart I.—Places reporting school programs for blind and partially seeing children



Source: Biennial Survey of Education in the United States, Statistics of Special Education for Exceptional Children, 1947–48, 1952–53, and 1957–58.

premature infants, thousands had been added to the number of visually handicapped children. From the middle 1950's on, as research findings were widely applied, retrolental fibroplasia all but disappeared but those blinded during this period are reaching school age today.

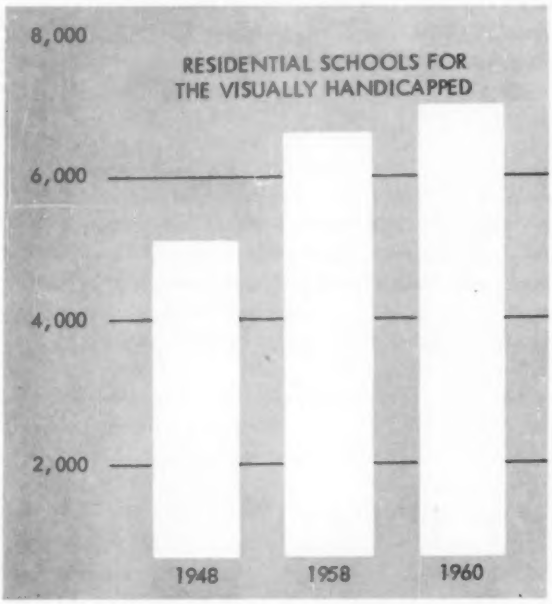
Reliable figures are difficult to obtain, but information now available permits a calculated guess that about 1 child in every 3,500 or 4,000 children in public elementary schools, both local and special residential, needs to learn braille and to have the skilled services of trained teachers of the blind. The rate of blindness in secondary schools is even lower. About three-fourths of those for whom the use of braille is a basic skill are in grades 1 through 8. Several thousand of these children are part of the temporary retrolental wave, which will soon pass through elementary school and on to secondary.

Changing educational philosophy also is affecting the number of children classified, for educational purposes, as blind. In the past doctors believed that children with

very limited vision might damage what little remained if they used it to the full extent in school. Many children were routinely taught to read braille whether or not they could see to read print. Within recent years, in the light of new medical knowledge, doctors and special educators have reversed this point of view and are now encouraging children, especially in their early formative years, to develop to the maximum even slight amounts of residual vision.

This change in practice, along with a new interest in exact refraction and the use of high-powered optical aids in reading, may enable most children with some measureable vision to become reasonably efficient readers of print. Already these developments have caused many schools to reexamine their educational classification of visually handicapped children. Some who in the past would have started their reading in braille are learning to read print and are no longer classified as blind. If present trends continue, there is reason to believe that, after the children blinded by retrolental fibroplasia have been graduated and many children who would formerly have been taught by braille methods are taught to read print, the incidence of blindness will drop to about 1 child in every 7,000 or 8,000 of the school population. Today, however, more blind children are reaching school age than at any time in our history. All of them need special programs, and requests for such programs are mounting.

Chart II.—Enrollments in residential schools for the visually handicapped



Source: 1948 and 1958 figures are from the Biennial Survey of Education in the United States, Statistics of Special Education for Exceptional Children, 1947–48 and 1957–58; 1960 figures represent the number of children registered by residential schools for the visually handicapped with the American Printing House for the Blind, January 1960.

In view of the mounting requests, the rising school population, and the increasing efficiency in locating and reporting blind children, it may be unrealistic to conclude, as some have concluded, that the need for program development is temporary. Some modifications will undoubtedly be needed, but long-range plans made now may make extensive program adjustments unnecessary 10 or 15 years from now. To be of value long-range plans must be carefully made. School officials will need to consider many aspects of program planning, including location of pupils, size and location of school systems, teacher case loads, the kinds of programs needed, and the type of preparation teachers should have.

Few local school districts have enough blind pupils to justify employing full-time special teachers. One special teacher assigned to a full-time special class or resource room can serve from 4 to 12 pupils well; one working as an itinerant or contact teacher in one or more school districts can seldom serve more than 4 or 6 well. Teacher case loads and low rate of blindness take on new meaning when considered in relation to the size and the number of school systems in the country. Only about 350 of the more than 35,000 districts operating schools enroll 12,000 or more pupils and fewer than 125 enroll 25,000 or more. During this period, when there are many children who were blinded by retrolental fibroplasia, districts enrolling 25,000 pupils would expect to have not more than 6 or 8 blind children; 10 years from now they may expect to have, on the average, from 3 to 5.

Many neighboring school districts are pooling staff and other resources to provide better education for blind children. But more than pooling of staff and resources will be necessary. Since the overwhelming majority of school systems enroll fewer than 3,000 children, further expansion and upgrading of residential schools for the visually handicapped and careful planning to develop better special programs to serve rural areas will be needed.

There are probably three times as many partially seeing children as blind children in the school-age population. These children should be considered in long-term planning, for their visual limitations interfere with their learning. Some teachers and some administrators are already looking ahead. For example, some teachers of blind children are preparing to work with partially seeing and some are being employed to teach both groups. Some systems, anticipating fewer blind children when those now enrolled are graduated, plan to retain their special teachers and

to provide better opportunities for the partially seeing and for those visually handicapped children who have additional disabling conditions.

Long-term planning also should provide for improvements in established programs. Many now lack the essentials of a sound educational program, including standards to guide officials in developing classification and admittance procedures, in determining teacher qualifications, and in providing basic educational aids, equipment, and books. Ordinarily only in the largest systems do special teachers have access to consultation with supervisors trained and experienced in their field and to the other resources essential to sound instructional services. In smaller systems many teachers are so busy with a host of related activities that they have little time for the job they were employed to do—teach children. Some of these teachers have, for instance, total responsibility for screening and selecting the children with whom they will work; dismissing children no longer in need of their services; ordering and distributing books and aids; transcribing textbooks into braille; supervising volunteer groups of transcribers; and conducting inservice training for regular classroom teachers who have blind children in their rooms.

The need for area planning involving several school systems, for long-range statewide programs, and for program standards and guidance has led many educators to look to State departments of education for assistance in providing for the education of the visually handicapped. Shortly after the act "to Promote the Education of the Blind," was amended in 1956 to make all blind children eligible for benefits, the need for organized State plans became apparent to all. The act as amended provides books and educational aids, which are manufactured at the American Printing House for the Blind for children in regular classroom as well as for those in special classes and residential schools. State education departments and special residential schools help distribute these materials.

Since this is a new undertaking for many State departments and since many agencies and organizations may be involved, some States are forming advisory committees to aid them. Such committees vary from place to place, but most of them include persons from State departments of education, State residential schools for the visually handicapped, State health departments, county and local school systems enrolling blind and partially seeing children, and vocational rehabilitation agencies. Their goal is to develop systematic long-range plans not only for the distribution of special materials but also for meeting the educational needs of blind and partially seeing children throughout the State.

State departments of education have faced difficult tasks in recent years in expanding special educational facilities and at the same time raising standards. They face difficult tasks in the years ahead—they will need the best thinking and the cooperation of all within each State who understand the needs of visually handicapped children if they are to make and carry out realistic long-range plans. Such plans call for continuous study and attention to many factors including recruitment and certification of special teachers, inservice training of special teachers and orientation of regular classroom teachers working with blind and partially seeing children, revisions and new provisions in State laws and regulations governing educational programs, and functional referral procedures among the many public and private agencies working on behalf of visually handicapped children.

EDUCATION OF BLIND CHILDREN is only a small part of American education, but it is an important part. Much has been done in recent years to give these children a better education, but clearly much remains to be done if they are to have equal educational opportunity and the country is to have the benefit of their talents.

Russian language study under NDEA

RUSSIAN, one of six languages high on the priority list of the U.S. Commissioner of Education, is enjoying a surge of popular interest. For more study of this language, students, scholars, and educational institutions are receiving financial aid from both public and private sources. One major source of assistance is the Federal Government, which through the National Defense Education Act is encouraging language study.

Of the several titles in NDEA which in one way or another can advance language study in schools and colleges, one in particular lends itself easily to a measurement of how much assistance is going specifically to the

Russian language. This is title VI, which provides funds for fellowships to study languages long neglected in this country, for centers offering advanced study in the languages, for institutes to give advanced training to language teachers and supervisors, and for studies and surveys of needs in language instruction.

Modern foreign language fellowships.—In the first 2 years under NDEA, Russian has led in the number of fellowships granted for the study of critical languages. Of the 171 fellowships awarded in the first year (1959–60)—all in the six languages—69 were in Russian. Of the 472 awards in 1960–61, distributed among 31 languages, 132 were in Russian.

Language and area centers.—During academic year 1960–61, 46 centers offering 44 languages are receiving NDEA support. Eleven offer Russian.

Language institutes.—By the end of this academic year, 3,132 elementary and secondary school teachers of modern foreign languages will have been enrolled in NDEA summer and academic-year institutes. Of these, 149 will have studied Russian. This summer, for the first time, Russian-language teachers will study in the Soviet Union through an NDEA-supported institute: the last half of Indiana University's 10-week advanced foreign language institute in Russian for 42 secondary school teachers of Russian will be held in Moscow.

Research and studies.—Of 115 projects begun in fiscal years 1959 and 1960 (these involve studies and surveys, new methods of instruction, and development of special materials), two concentrate on Russian and nine on several languages that include Russian.

Still other help for the study of Russian comes from other titles of NDEA. Of the thousands of college students receiving loans under title II many are studying Russian, some with the intention of one day teaching it. Of the more than 8,000 projects approved by the States during the first 2 years of title III for acquiring equipment and materials for modern foreign language instruction in elementary and secondary schools, many are in schools that offer or will offer courses in Russian.

Twenty-seven of the 1,000 National Defense Fellowships awarded under title IV in fiscal year 1960 were in Russian and Slavic languages and literature. Title IV is also making possible a number of graduate programs in Russian studies: One, for example, at the University of Chicago, supported 8 fellowships in 1960; another, at the University of Indiana, supported 10 fellowships in 1960 and 4 in 1961.

In addition, through October of fiscal year 1960, two of the 80 research projects approved under title VII for research and experimentation in more effective use of media for education center directly on the study of Russian; ten others include Russian along with other languages.

Full reports on NDEA language programs are contained in the following publications. Unpriced publications are available from the Publications Inquiry Unit, Office of Education, Washington 25, D.C.

Title VI

Language and Area Centers: Report on the First Two Years, Title VI, National Defense Education Act of 1958, Language Development Programs. Washington, U.S. Department of Health, Education, and Welfare, 1960, 15 pp., OE–56002.

General information on the critical languages and area center programs, including a list of institutions and languages supported.

Language Institutes: Report on the First Two Years, Title VI, National Defense Education Act of 1958, Language Development Program. Washington, U.S. Department of Health, Education, and Welfare, 1960, 11 pp., OE–58000.

Summary of the program with detailed information on participating institutions, languages, and enrollments given in tables.

Modern Foreign Language Fellowships: Report on the First Two Years, Title VI, National Defense Education Act of 1958, Language Development Program. Washington, U.S. Department of Health, Education, and Welfare, 1961, 12 pp., OE 55015.

Provisions of the program and details on languages, institutions, and number of fellowships granted.

Research and Studies: Report on the First Two Years, Title VI, National Defense Education Act of 1958, Language Development Program. Washington, U.S. Government Printing Office, 1960, 30 pp., 30 cents, OE–12011.

Description of the 115 projects approved for research and study in modern foreign languages under four categories: Surveys and studies, methods of instruction, special materials for the five commonly taught languages, and specialized materials for the neglected languages. Indexed.

Other

Approved Graduate Program, 1961–62, Title IV, National Defense Education Act, Graduate Fellowships. Washington, U.S. Department of Health, Education, and Welfare, 1961, 25 pp., OE–55017.

Provisions of the program, subject areas, number of grants, and institutions.

News and Reports, Title VII—New Educational Media, Special Edition. Washington, U.S. Department of Health, Education, and Welfare, July 1960, 31 pp.

Description of research projects in educational use of auditory devices, motion pictures, multimedia, nonprojected materials, still projected materials, teaching machines, and television, receiving NDEA support in fiscal year 1959 and the first 4 months of fiscal year 1960.

Report on the National Defense Education Act, Fiscal Year Ending June 30, 1959. Washington, U.S. Government Printing Office, 1960, 62 pp., 45 cents, OE–10004.

Summary of all NDEA programs, including title VI and others with provisions for language development.

PAUL E. BLACKWOOD

Teaching elementary science

THERE IS A WAY of thinking about science that is both liberating and challenging to elementary teachers. It is to think of science as a way of freeing children's minds, as a creative experience, not solely as a body of knowledge or techniques to be learned. It is the way in which teachers and children do things when they are working or studying scientifically. The liberating quality for teachers of this way of looking at science is that it places the emphasis on the processes of investigation and inquiry, sets the stage for leading children to discover ideas for themselves, and places a premium on their learning *how* to explore the environment, *how* to seek valid information, and *how* to check the accuracy of observations made by others about the universe.

The challenge to the teacher is to make it possible for children to learn during their study of science that it is a *way* of seeking truth about the universe. This requires teaching science in ways that permit children to think, study, and work scientifically, as scientists. This leads us then to the crux of the matter. What do scientists do? How do they work?

Scientists seek ever more accurate and valid knowledge about the natural events and processes in our universe. They try to understand relationships among events and processes in nature and the behavior of matter and energy. They seek knowledge about the things on earth and beyond our earth. They seek answers that can be confirmed, that can be checked by others. Do scientists do more specific things that give us clues to teaching science to children? Let me mention three things.

Scientists seek accurate descriptions. They try to describe carefully a vast array of phenomena and things in our universe. Examples of the kinds of questions that call for descriptions are these: What is the universe? What is the universe like? What takes place? What happens? How do things occur? Under what conditions do things happen? What are the discoverable relationships between events? When children search for answers to questions like these, they are learning to study scientifically. And as they begin to find answers, they move toward another type of activity of scientists—*making explanations.*

Scientists attempt to make accurate explanations. They not only describe phenomena but also try to *explain* them, for explanations often rest on thorough and complete descriptions. Why do certain events take place? How are causes and related effects to be accounted for? Scientists are interested in trying to discover cause and effect relationships. They use the descriptions of certain relationships as explanations of other phenomena. For example, the question, "Why is the chestnut tree dying?" calls for an explanation. Investigation shows that a fungus or blight has infected the tree. Further observation shows that this blight damages all chestnut trees, but doesn't harm certain other trees. Much observation shows that the blight lives parasitically on the chestnut and saps its strength. This knowledge is *descriptive* of the relationship between the tree and the blight. In a sense we use this knowledge to *explain* why the tree dies.

Explanations are verifiable patterns of relationships between events. When these patterns or sequences of events seem invariably to apply, then they may be stated as principles, physical laws, or theories. These principles, laws, ideas—because they are accurate descriptions—are useful in making explanations.

Scientists make predictions. They use knowledge acquired from previously observed situations as a basis for predicting what will happen in new situations where condi-

Dr. Blackwood, specialist for elementary science in the Division of State and Local School Systems, Office of Education, has taught science education at Ohio State University, Central Washington College in Ellensburg, Wash., and Teachers College, Columbia University. He is the author of a number of science books for children, including *Experiences in Science, The World and Its Wonders,* and *Push and Pull, The Story of Energy,* and co-author of several Office publications. He is a member of the Executive Committee of the National Association for Research in Science Teaching.

tions are similar. For example, a scientist might predict that a chestnut planted near other infected chestnut trees would soon become infected and die of chestnut blight.

I HAVE STRESSED that the work of scientists includes observing and describing the world around them, seeking explanations, and making predictions. If science teaching is to be scientific, children should likewise have opportunities to do these things.

"Why does water disappear?" Children in school frequently study this question. Let me use it to illustrate how describing, explaining, and predicting enter into science activities in school.

A teacher can plan activities to help children find out whether water does disappear and, if so, under what circumstances. Does it disappear from a saucer? Does it disappear from a deep bowl? A stoppered bottle? Does it disappear more rapidly from a large surface than from a small one? Does it disappear faster or slower when wind is blowing over it? How does the temperature of the air above the water affect the rate of evaporation? How does the humidity affect the rate of evaporation?

Children can get the answers to these questions by observation. They can record what they observe. It is true, of course, that they can get answers to some of these questions from books but to let them learn exclusively from books robs them of the delight of discovery and the opportunity to satisfy their natural curiosity through firsthand investigations.

It is important for children to use several kinds of instruments in making accurate observations and descriptions. In studying water, for example, children may weigh quantities of water with scales, use clocks to measure time, and rulers to measure depth of water or diameter of surfaces. They may use thermometers to measure the temperature of water and air and hygrometers to measure humidity, wind meters to find the speed of the wind. With instruments children can get more information about the environment than they can through their senses alone. When children use instruments to get facts for their descriptions, they are learning to use scientific methods. Most elementary science programs would be made more effective if children used more instruments than they do in the average school.

But to return to our question, "Why does water disappear?" Children have observed that it *does* disappear and that it disappears at different rates under different conditions. But children will ask why and want to find explanations.

Though children can find out about the nature of water from their own observation and experiments, they also need to study the observations and descriptions made by scientists. They will learn, for example, that all matter is made of small particles or molecules, that molecules are in constant motion and move faster when their temperature rises, that molecules at the surface of a liquid tend to move into the space above. Although these statements about liquids (in this case, water) seem to have some bearing on the answer to the question, they are descriptive statements about the behavior of water. From their reading, children learn that scientists use broad descriptions to explain specific situations they have observed, in this case the motion of molecules. Children use their knowledge to help explain their observation that water evaporates.

Scientists make predictions, yes. But can children make predictions? What lies behind children's decisions to place a glass cover on their aquarium? or to place a cover over the moistened seeds they are germinating? or to hang their wet gloves on a line? Surely they do make predictions of ways to achieve certain purposes as they apply scientific knowledge.

As children in science classes learn through their own experiences to observe, describe, explain, and predict, they develop valuable habits and skills. For example, they learn to value care and precision in working, to verify facts, and they learn the danger of being dogmatic and biased. And, in addition, they gain knowledge of the world. In teaching science, teachers can help children add to their storehouse of knowledge.

I am not suggesting that science monopolize the study of elementary children, that practical experiments are the only way of learning. Nor am I proposing to lower the levels of knowledge children in science should possess: there is considerable evidence that children acquire more meaningful knowledge when firsthand investigations are a part of their study than when they are not. The great gain when children study science is that they learn methods of inquiry which carry over into other subjects and lead to understanding.

A CHILD who has failed to learn certain specific facts in his study of science may in no way be limited in the future. But a child who has failed to learn the methods of inquiry by which scientific knowledge is acquired and verified is indeed handicapped. For this reason it is important that teachers think about the liberating and challenging effects of considering science as a method of doing things as well as a body of knowledge to be taught.

Jacques Barzun has said: "The humble 3 R's begin in strict utility and end up in poetry, science, and the search for the Infinite." The child who begins to search for an answer to the question "Why does water evaporate?" may end in a search for the Infinite. If his teacher is imaginative and creative, he will find light along the way and pleasure in the search.

ROLAND G. ROSS

Recent trends in guidance, counseling, and testing

Taken all together, State reports on programs under the National Defense Education Act make an excellent national report on what the schools are doing in the fields covered by the act. Here Mr. Ross tells about some early State reports on guidance programs and about a check and doublecheck the Office of Education has made of those reports for the purpose of discovering trends in guidance.

EVEN A CURSORY GLANCE at today's educational literature shows that school administrators are deeply interested in the many facets of a program of guidance services. They want what they read translated into programs of action; moreover, they are ready and willing to ask their boards of education to budget for this all-essential educational effort. Obviously guidance has been accepted as essential to any well-balanced program. Thinking which yesterday was considered as bordering on heresy now is accepted as orthodoxy. Ideas that once were only a glimmer in the professional eye have become part of a steady and determined gaze.

How is this change of mind showing itself in our schools? What is happening in guidance, counseling, and testing programs?

A great deal is happening, particularly now, when the National Defense Education Act is hurrying the growth of guidance programs, building with despatch on foundations laid in past decades by supervisors of guidance and counselor-educators working together. Certain trends seem to be appearing. From narrative reports that came to us from the States after the first 3 months of NDEA, we drew up a list of these trends and sent a copy of them to each State and Territorial supervisor of guidance, asking him to judge whether they actually were trends in his own State. A tally of the replies, from 42 States and Territories, shows that some trends are more firm than others; but every trend on our list drew more affirmative replies than negative and uncertain combined.

What follows is our list, rearranged somewhat to accommodate our generalizations about what is happening in the guidance programs of our schools. With each item is a count of the responses from State supervisors.

Mr. Ross, specialist for program organization in the Guidance, Counseling, and Testing Section of the Office of Education, came to the Office in 1959 from the Iowa State Department of Education, where he was supervisor for guidance. He has taught summer courses in guidance at several universities, including Boston University, University of North Carolina, Oregon State University, University of Wyoming, and University of South Dakota.

Administrative support grows stronger

More schoolwide efforts are being made to coordinate all the parts of the pupil personnel program in order to make optimum use of facilities and staff.

Yes 34 No 2 Uncertain 6

Administrators are seeking more information about local guidance programs—about kinds of tests, number of tests, use of counseling time, kinds of problems, and so forth.

Yes 38 No 0 Uncertain 4

There is more schoolwide planning to determine the areas of greatest need in the local situation.

Yes 34 No 4 Uncertain 4

Schools are giving more attention to a 3- or 4-year plan that is versatile enough to serve all students in high school.

Yes 33 No 2 Uncertain 7

More schools are moving toward a long-range testing program covering grades 1 to 12.

Yes 38 No 1 Uncertain 3

Teachers take a more active part

Schools are emphasizing teacher participation in the guidance program.

Yes 32 No 5 Uncertain 5

Teachers are getting more inservice education on how to participate in the guidance program and how to be helped by it.

Yes 36 No 2 Uncertain 4

Teachers with special aptitude for guidance are being selected from within the staff to become counselors.

Yes 27 No 5 Uncertain 6 No reply 4

The underlying philosophy grows clearer

Educators are making a greater effort to define the purposes and objectives of guidance programs in the schools.

Yes 39 *No 1* *Uncertain 2*

More and more schools are expressing, in written form, their philosophy of guidance as part of the total educational program.

Yes 30 *No 4* *Uncertain 8*

Counseling is becoming a profession

More schools are employing full-time counselors.

Yes 36 *No 2* *Uncertain 4*

Professional education for counselors is improving, is moving toward at least a 45-semester-hour program.

Yes 31 *No 5* *Uncertain 6*

NOTE: Further evidence of this trend is in the fact that the University of Chicago and some thirty other colleges and universities have recently announced 2-year programs for preparing counselors for junior and senior high schools.

More and more counselors are coming to their jobs equipped with a good working knowledge of the many facets of education and with the ability to draw on many disciplines as they help pupils solve their problems.

Yes 42

More and more counselors are being given direct responsibility for all of a school's coordinative group guidance activities.

Yes 27 *No 4* *Uncertain 8* *No reply 3*

More clerical staff is being assigned to counselors, to give them more time for their specialty—counseling the individual.

Yes 33 *No 3* *Uncertain 5* *No reply 1*

Each student gets more attention

More schools are recognizing that individual counseling takes time: They are trying for a counselor-pupil ratio of 1 to 300.

Yes 34 *No 4* *Uncertain 4*

More effort is being made to help the individual student plan his course toward a particular occupational objective.

Yes 28 *No 4* *Uncertain 10*

Educators are showing a greater understanding of the importance of keeping a running inventory of each pupil's assets and liabilities.

Yes 40 *No 1* *Uncertain 1*

Schools are trying harder to find and guide the exceptionally talented pupil.

Yes 41 *No 0* *Uncertain 1*

More information accompanies the pupil as he moves from school to school.

Yes 37 *No 2* *Uncertain 3*

More and more, the school keeps its pupils' abilities and needs in mind as it develops its curriculum and guidance program.

Yes 28 *No 4* *Uncertain 10*

The student's parents are increasingly involved: the counselor calls on them to join him and the student in both career planning and problem solving.

Yes 36 *No 3* *Uncertain 3*

Testing programs are sounder

More schools are keeping their testing programs in proper perspective, i.e., they are thinking of tests only as a means to an end, as a factor in the smoothness, efficiency, and productivity of their educational effort.

Yes 34 *No 3* *Uncertain 5*

More schools are basing their testing programs on their overall educational efforts.

Yes 29 *No 3* *Uncertain 10*

Test results are used more extensively

Schools do more specific planning for the use of test results in instruction, diagnosis, and grade placement.

Yes 29 *No 4* *Uncertain 9*

Test results are helping school staffs to counsel the student, to guide him in his learning and achieving, to evaluate his achievement in terms of his ability, to discover and use his interests, to adjust the curriculum to his needs, to help him understand himself, and to help him plan his career and select his courses.

Yes 38 *No 2* *Uncertain 2*

Test results are used more often for administrative purposes to help determine policy for (a) pupil promotion, (b) grouping of pupils, and (c) the entire educational program.

(a) Yes 13 *No 14* *Uncertain 15*
(b) Yes 28 *No 4* *Uncertain 10*
(c) Yes 35 *No 3* *Uncertain 4*

Schools are using more technical devices to increase speed and accuracy of their analysis of test results, by pupil, grade, and school.

Yes 32 *No 4* *Uncertain 6*

Administrators are making more use of the testing program to help them take a critical look at the school's educational objectives, to help them clarify these objectives.

Yes 24 *No 0* *Uncertain 18*

Evaluation is more objective

At both State and local levels educators are emphasizing the importance of having a systematic program of evaluating guidance activities.

Yes 33 *No 4* *Uncertain 5*

Schools are making more followup studies to determine the efficiency of their programs.

Yes 28 *No 3* *Uncertain 8* *No reply 3*

Local schools are doing more action research, i.e., research within the present program.

Yes 27 *No 8* *Uncertain 7*

More cooperative research is being done: State, county, and local agencies are joining forces.

Yes 37 *No 2* *Uncertain 3*

Physical facilities are better

Physical facilities for counseling services are more nearly adequate.

Yes 42

Many schools are using electronic equipment to tabulate and chart the replies to questionnaires.

Yes 28 *No 10* *Uncertain 4*

Public support grows stronger

Organizations outside the school, especially business and industrial organizations, are participating in the school's guidance activities.

Yes 29 *No 4* *Uncertain 9*

Educational agencies are calling on more consultive committees for help in planning their guidance programs.

Yes 22 *No 12* *Uncertain 8*

Guidance activities are getting more publicity in the pages of national nonprofessional magazines.

Yes 26 *No 6* *Uncertain 10*

AS WE EXAMINE the present status of guidance programs throughout the country and see the emerging trends, we find much evidence that the States are recognizing and meeting many needs. What they have accomplished thus far is most encouraging and augurs well for the future.

Already they are going on to the problems that remain. They are working, for example, to improve the overall professional education of the counselor, who needs to know more about basic curricular problems, more about current and coming needs for skilled workers and technicians, and more about the cooperative relationships he can have with other disciplines. States are also trying to overcome shortages of qualified counselors and to find ways of better utilizing the counselor's time. For their efforts to define more clearly the counselor's role, help is already on the way: many studies are examining this very matter, and findings will soon be available.

Meeting the new school library standards

MARY HELEN MAHAR

All over the country representatives of educational and lay organizations are taking part in State, regional, and national conferences on the new school library standards published by the American Library Association in the spring of 1960. *Standards for School Library Programs* [1] was prepared by a committee appointed by the American Association of School Librarians (a division of the ALA and now also a department of the National Education Association) and composed of leaders in the school library field and representatives of 20 educational and lay organizations.

MISS MAHAR, who is Office of Education specialist for school and children's libraries, was consultant to the standards committee of the American Association of School Librarians.

The new standards are both qualitative and quantitative.

The qualitative standards are based on the cooperative planning of educators concerned not only with providing good school library service, but also with the effects such service will have on our system of education. A basic tenet of the philosophy of the standards is that "the most important part of the library program is the work with students and teachers, those activities and services that make the library an educational force in the school. The objectives of very good schools require that the library program be in full operation, which can be done only when the school meets standards for the personnel, materials, funds, and quarters of the school library."

[1] Available from the Publishing Department of the American Library Association, 50 E. Huron Street, Chicago 11, Ill., 1960, $2.50.

The quantitative standards are based on research in schools over the country, both in schools having good libraries and in those reporting they could use to advantage the staff and resources recommended in the standards. The committee agreed on the soundness of the quantitative standards as a basis on which to build quality.

The standards apply to elementary, secondary, and combined elementary-secondary schools—to schools of any type of school-grade organization and to both public and nonpublic schools. The revised standards include special provisions for new schools and for schools with less than 200 students. Not only do they state the principles of school library services and make specifications for staff, resources, and quarters, but they include recommendations on the functions of State and local boards and departments of education, school administrators, school library supervisors, curriculum coordinators, and teachers in planning and developing school library programs. At all times they underline the philosophy that all elementary and secondary school educators should share the responsibility for school libraries.

To publicize the standards and put them into effect the American Association of School Librarians has appointed a Standards Implementation Committee. Mary V. Gaver, professor at the Graduate School of Library Services, Rutgers University, is chairman; other members are school librarians from different regions of the United States. Each State has an implementation chairman.

Last year the implementation committee sponsored nine pilot projects—one each in the District of Columbia, Hawaii, Massachusetts, Michigan, Montana, New Hampshire, Oklahoma, Virginia, and Washington. Each project consisted of 1- or 2-day meetings conducted by such agencies as the State department of education, the State library or school library association, or the State education association. The committee furnished speakers or consultants. School administrators and teachers, as well as school librarians and laymen, attended.

In addition, several colleges and universities offering library education programs and State education and library associations have organized meetings for interpretation of the standards. In Arkansas, Michigan, New Jersey, Rhode Island, and several other States laymen and educators have formed statewide committees to develop long-range plans for encouraging all schools to meet, even to exceed, the standards.

For the school year 1960–61 the committee has awarded funds for speakers in still other pilot projects—in Arkansas, California, Florida, Idaho, Ohio, South Dakota, West Virginia, and, for the second year, in the District of Columbia. The District's project is a course at the District of Columbia Teachers College on "School Library Materials and Their Use in the Curriculum," for principals, teachers, and school librarians. Guest lecturers will take part.

In November 1960 the Council on Library Resources, Inc., made a grant of $100,000 to the ALA, in behalf of the American Association of School Librarians, to assist in the promotion of higher standards. The School Library Development Project has its headquarters in Chicago under the direction of Mary Frances Kennon, who is on leave from her position as associate supervisor of school library services at the North Carolina State Department of Public Instruction. The project will give financial assistance to programs for implementing the standards and provide consultive service and materials to organizations and groups that are planning programs. Applications for assistance must be cleared by the State chairman for implementation of school library standards. Inquiries should be addressed to Miss Mary Frances Kennon, Director, School Library Development Project, 50 E. Huron St., Chicago, Ill.

To strengthen the school library profession and to develop school libraries that really meet the needs of teachers and pupils, educational leaders must make concerted efforts. The new school library standards provide answers to many perplexing questions and can be of great practical value to school boards and administrators in planning for school library service. Conferences on the implementation of the new standards can provide a springboard for new programs in school library development.

Many school libraries have far to go . . .

Many school libraries have far to go before they meet the new national standards set by the American Association of School Librarians. How far is indicated by a comparison of some average conditions in school districts enrolling at least 150 pupils with ALA standards of quantity (current average conditions are from Public School Library Statistics, 1958–59, by Mary Helen Mahar and Doris C. Holladay, recently published by the Library Services Branch of the Office of Education):

	ALA standard school library	Average public school library
Book collection	10 books per pupil*	5 books per pupil
Annual expenditures for books	$4 to 6 per pupil*	$1.60 per pupil
Pupils per librarian	300	1,740

*In schools with centralized libraries.

Note: On page 25 of this issue, in Statistic of the Month, are other highlights from Public School Library Statistics, 1958–59.

ad Minutes

Briefly noted --- for the busy School Administrator

Material for Adminutes *is prepared in the School Administration Branch, Division of State and Local School Systems. Contributors are the specialists in the Branch—this month, John L. Cameron, Gene C. Fusco, Clayton D. Hutchins, Marian A. McGhehey, Albert R. Munse, Winston L. Roesch, James P. Steffensen, Alpheus L. White.*

Help for school law researchers. The growing need for research in school law has led the Office of Education to establish, in its State School Systems Section, a school law team, headed by Marion McGhehey, specialist in State school law.

For the past several years legal materials bearing on school administration—State statutes, administrative regulations, and court decisions—have been accumulating fast. In 1960 alone, approximately 40,000 legal cases involving school districts or school staff were initiated; and although most of such cases are settled or dismissed in local courts and never reach appellate levels, court decisions make up a substantial part of the body of school law. Together with administrative rules and regulations they support and supplement the statutes which establish the powers, duties, and responsibilities of both State and local educational agencies. Obviously any aid and comfort given to research in school law is a contribution to knowledge about public policy for education.

The Office team has explored the various needs for research in school law—in State departments of education, in local school districts, and in institutions and agencies responsible for the professional preparation of educational administrators—and has decided to concentrate its first attention on four types of school law: State education codes, State legislation, decisional law, and administrative law.

To assist researchers it has also established a school law library. The collection will include documents on administrative law not readily available elsewhere, such as the opinions of attorneys general and the rules and regulations of State agencies which have the force and effect of law.

★ ★ ★

Call for Federal support. A vigorous Federal support program to lift elementary and secondary schools "to a new level of excellence" got priority in the recommendations that in January went to President Kennedy from the Task Force Committee on Education, under the chairmanship of Frederick L. Hovde of Purdue University.

"State and local governments alone cannot provide the funds needed," the Committee said. A Federal program of support for the public schools, it went on to say, should be based on these considerations:

> Federal responsibility for education is long-term, not temporary.
> Low-income States, most of them in the South, need extra funds.
> Cities over 300,000 face "unique and grave educational problems" and need extra funds too.

For helping public schools reach the new high level, the Committee offered a legislative proposal which it estimated would cost over $1.4 billion a year for the first 4 years of a continuing program: $1.2 billion for general support, $140 million for special aid to low-income States, and $120 million for big cities.

The Committee made two other legislative proposals: A Federal support program for housing and academic facilities for colleges and universities, and the extension and strengthening of the National Defense Education Act. Together, the three proposals would cost some $10 billion in grants and loans over the next 4½ years. "Anything less than the full program recommended," said Chairman Hovde as he presented the report, "would not be significant in improving American educational standards."

One of the Committee's several recommendations for administrative action was that the President appoint an advisory committee on education comparable to the Council of Economic Advisers and the Science Advisory Committee.

★ ★ ★

From citizen to legislature. In the State of Washington a Citizen's Committee on Education, through its subcommittee on school finance, has recommended that the legislature encourage educational innovations at the local level. How? By reducing the required local tax levy for the State equalization program in order to make more local resources available for educational programs which are unique, experimental, or advanced.

The subcommittee has also advanced legislative proposals which include the following:

> That the local dollars needed to provide a foundation program not be dependent upon local special levy elections.
>
> That steps be taken to insure that property be appraised at its fair and true value and that assessment be at 50 percent as required by the State Constitution.
>
> That assessment practices be improved by means of professionalization of appraisal and separation of the appraisal and assessment functions.
>
> That teachers' salaries be commensurate with the compensation received by other professional persons of like educational background.

Research project on school finance. With funds from the Carnegie Foundation, Syracuse University now begins a research project on school finance.

Under the direction of Jesse Burkhead of the Department of Economics, the university's economists and political scientists will study and report on four large topics:

Educational expenditure and revenue: Determinants of expenditure for public elementary and secondary education, State and local tax bases for the support of education, community power structure, and public education.

Utilization of educational resources: Cost-quality relationships, cost-of-education index.

Government relations in public education: Political, fiscal, and administrative roles of State departments of education; school government in suburban areas.

Federal aid to education: Aid to federally affected areas, administrative experience under the National Defense Education Act, economic issues in Federal aid, political analysis of Federal aid legislation.

★ ★ ★

School boards in action. The 1961 legislative season is approaching in most States, and local school board members, working through their State school board associations, are busy hammering their legislative proposals into shape. Legislative committees of State school board associations are studying proposals and soliciting the views of board members. In Pennsylvania, for example, the State School Directors Association adopted at its 1960 meeting a legislative program containing 32 proposals.

Once the legislatures are in session, State school board associations will work to draw public attention to needed school laws. They will circulate special newsletters to school boards, send representatives to appear before committees of the State legislature, and urge members to get in touch with their legislators. How successful will they be? If past experience is an indication, they will accomplish much. In describing the legislative efforts of the Indiana School Board Association in 1959 to secure passage of the School Reorganization Law, the Association's Executive Secretary recently stated: "We were successful in this endeavor, and the most important single piece of school legislation ever passed in Indiana is today affecting every school corporation and every child in the State."

★ ★ ★

The junior high school delivers. Berkeley, Calif., a pioneer in the junior high school movement, now begins its second fifty years with the unit devoted exclusively to pupils in grades 7, 8, and 9. As it looks back at the first fifty years, it sees many reasons for satisfaction.

C. H. Wennerberg, the present superintendent of the Berkeley Unified School District, writes about these reasons in the December 1960 issue of the *California School Boards Association Bulletin.* He says that although Berkeley established the junior high school out of a pressing need to alleviate crowding in the high schools at a minimal cost to the taxpayer, school officials had high hopes for other benefits. They hoped the new unit would (1) reduce the number of dropouts at the end of the fifth grade, (2) result in a more natural grouping of children, (3) ease the transition from elementary to high school, (4) enrich the content of the program, and (5) free the high school for intensive work.

The junior high school in Berkeley has not disappointed those hopes, says Dr. Wennerberg. Now the city's school officials, bearing in mind James B. Conant's recent recommendations for the junior high school, plan to continue pioneering in the education of children during their difficult early adolescent years.

★ ★ ★

The city schoolhouse. City public school systems are adopting several kinds of schoolhousing accommodations to cope with the problems that accompany urban redevelopment projects. Pittsburgh, St. Louis, and Buffalo, for example, are using one or more of these: (1) Buildings that provide apartments for families on the upper floors and schoolrooms on the lower, (2) school buildings right in the redevelopment area, and (3) school buildings on sites adjacent to the redevelopment area.

Average net interest cost of bonds sold for public school purposes, November 1959–November 1960, by Moody ratings

This summary is based on sales reported by the Investment Bankers' Association. About 75 percent of the bonds had a Moody rating

Period	AAA	AA	A	BAA	BA	All rated bonds
1959–60						
November	3.06	3.43	3.79	4.10	4.75	3.71
December	.....	3.80	3.91	4.22	.....	3.94
January	3.29	3.59	4.03	4.39	4.71	3.80
February	.....	3.60	3.71	4.09	4.48	3.86
March	*4.02	3.40	3.64	4.19	4.58	3.79
April	3.18	3.63	3.79	4.24	4.50	3.83
May	3.24	3.31	3.77	4.13	4.51	3.80
June	3.02	3.66	3.62	4.12	4.30	3.73
1959–60 average	3.26	3.63	3.78	4.21	4.55	3.84
1960–61						
July	3.08	3.37	3.72	4.00	4.47	3.78
August	2.81	3.01	3.47	3.73	4.23	3.47
September	2.66	3.56	3.48	3.80	4.41	3.51
October	.....	3.26	3.54	3.90	.....	3.63
November	2.78	3.15	3.39	3.78	4.13	3.44

*All are revenue bonds of school building authorities, which are usually at least 0.5 percent higher than general obligation bonds.

Education of little children— A few facts

In 1958 the Office of Education conducted a survey of elementary school systems in cities with populations of 2,500 and over. In the survey, the Office sought information from which it might draw a picture of elementary schools in the Nation as a whole, in cities of various sizes (group I, population of 100,000 and over; group II, 25,000 to 99,999; group III, 10,000 to 24,999; and group IV, 2,500 to 9,999), and in the different geographical regions. With a 100-percent response to the questionnaire, plus a sampling procedure that insures a 5-percent level of confidence, the survey findings should present a reasonably accurate picture of our elementary schools.

The place of the nursery school and kindergarten in the elementary school is one of the subjects covered by the survey.[1] *Here some of the basic facts from the survey are reported by Stuart E. Dean, Office specialist in elementary school organization and administration.*

The nursery school has not yet been accepted as an integral part of the public school system, and there is little evidence to suggest that it will be in the next few years. Only 4.5 percent of all cities with populations of 2,500 and over maintain public nursery schools, but the percentage of cities varies by size of population group and by region:

Group I	9.4	Northeast	3.1
Group II	14.7	North Central	3.4
Group III	8.5	South	4.6
Group IV	2.0	West	9.1

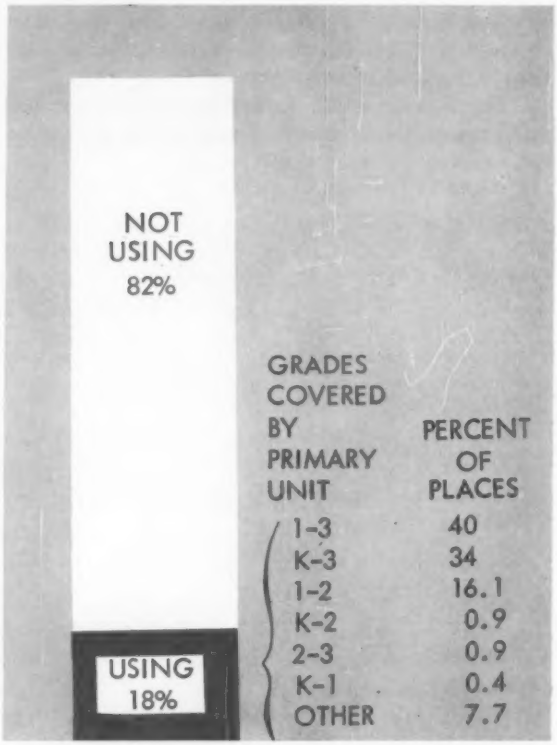
In contrast, kindergartens are well established in public schools: 70.4 percent of all cities support public kindergartens, and the cities are fairly evenly distributed across the country. These are the percentages by city size and by region:

Group I	85.8	Northeast	68.9
Group II	74.7	North Central	73.0
Group III	79.4	South	70.4
Group IV	66.9	West	67.3

Responses to the questionnaire indicate that the number of public kindergartens will increase in the near future: About one-third of the cities that are now maintaining them will very likely expand their programs; about one-fifth of those that are not plan to organize them.

In general nursery schools and kindergartens are financed by public tax funds, by private donations, or by a combination of public and private funds:

Type of financial support	*Percent of urban places supporting— Nursery schools*	*Kindergartens*
Public tax funds	17.1	80.8
Private donations	33.7	5.8
Combination of public and private	45.1	3.0
Not reported	4.1	10.4



Urban places with public nursery schools and kindergartens

At present 18 percent of the cities are using the primary unit, a new organizational pattern for grouping primary children for two or more consecutive years. Here are the percentages by city size and region:

Group I	26.4	Northeast	14.5
Group II	32.0	North Central	18.2
Group III	17.8	South	18.9
Group IV	16.0	West	21.8

In a majority of these cities the ungraded plan covers kindergarten through grade three or the first grade through grade three (see chart). There are indications that a rapidly increasing number of schools are adopting the unit plan and that in time it will greatly influence educational programs for young children.

[1] Dr. Dean's 126-page report of the survey, *Elementary School Administration and Organization* (OE-23006), is available from the Government Printing Office, for 55 cents.

PENROSE B. JACKSON

Federal funds for elementary and secondary education

For more than 25 years the Office of Education has issued a series of publications on Federal funds for education, based on information it has gathered from Government agencies. These publications report the assistance Federal agencies have provided in the form of commodities, funds, or services to educational institutions and agencies or tuition payments, contracts for service, school facilities, or instruction for students at all academic levels. Because public interest in Federal support of education has greatly increased in recent years, the Office of Education and the National Science Foundation in 1959 jointly initiated a new series of projects to gather the additional data needed for analyses of funds by fields of study, academic levels of participants, and number and kinds of recipients. Such analyses should reveal the major purposes of each program, the kinds of activities that help to develop the technical, scientific, and other manpower resources of the Nation, and the scientific and other fields in which Federal support is achieving important goals.

The Office will issue a full report of the project at a later date; in the meantime Mr. Jackson presents here a summary of the findings on Federal support for elementary and secondary education.

THE FEDERAL GOVERNMENT spent $786 million in the 1958–59 school year and $867 million in 1959–60 in support of elementary and secondary education. The Government made these funds available for several purposes. In general, however, they fall into three categories: (1) For the education of particular groups or persons in geographic areas for which it recognizes a special Federal responsibility; (2) for a major purpose other than the support of education, such as disposing of surplus agricultural commodities, supporting prices of agricultural products, or utilizing Government surplus property; and (3) for the specific purpose of supporting elementary and secondary education. But whatever the Government's purpose, the funds help finance elementary and secondary schools by providing for current operating expenses and for facilities.

Mr. Jackson joined the staff of the School Finance Section as specialist in Federal funds for education in April 1960. He was formerly director of the Institute of Governmental Research and assistant professor of public administration at Florida State University. At the institute he directed research in State and local government and a consultation, service, and training program for State and local government agencies.

For current operating expenses

A large part of the total for both years went into current operating expenses—$591 million in 1958–59 and an estimated $665 million in 1959–60. Programs administered by the Department of Health, Education, and Welfare and the Department of Agriculture accounted for almost four-fifths of the total in both years. These and other agencies used funds for all three purposes and some for a combination of purposes. Within these broad-purpose classifications, most of the funds were for the support of special as opposed to general educational programs.

Almost $258 million in 1958–59 and $289 million in 1959–60, or more than 43 percent of the total for current operating expenses in both years, went for programs in the first category—to finance education for particular groups and areas for which the Government accepts special responsibility. These programs provide for direct Federal operation of schools such as those for training of Indian health personnel, or grants to States, school districts, or individuals.

More than three-fourths of the total spent for this purpose (almost 31 percent of the total for current operating expenses) was for education in communities where large Government land holdings have cut down local tax revenue or where Government activities have increased school costs. These are the programs in this group:

Department of Health, Education, and Welfare
- School support in federally affected areas

Department of Agriculture
- School support from National Forest revenue
- School support from submarginal land revenue

Department of the Interior
- School support from public land revenue

Atomic Energy Commission
Public schools at AEC facilities

Funds for other programs in this category, representing about 12 percent of the total for current operating expenses, were used for the education of particular groups for which there is a special Federal responsibility. There are seven programs in this group:

Department of Health, Education, and Welfare
Gallaudet College
Education in Public Health Service hospitals
Training of Indian health personnel

Department of Defense
Education of dependents of military personnel

Department of the Interior
Education of Indians
Education of dependents of National Park Service employees

Department of the Treasury
Education of dependents of Coast Guard personnel

Almost $280 million in 1958–59 and $310 million in 1959–60, 47 percent of all funds for current operating expenses in both years, went to programs in the second category. Although the two programs in this category are authorized for purposes not primarily educational, they contribute to public education. The school-lunch program in the Department of Agriculture provides funds and food for school children primarily as a means of using surplus agricultural commodities and supporting prices. The testing, counseling, and placement interviews of high school students by the Department of Labor is an employment service.

Table 1.—Total Federal support of elementary and secondary education, by agency, 1958–59 and 1959–60

[In thousands of dollars]

Agency	1958–59	1959–60 [1]
Department of Health, Education, and Welfare	$368,083	$406,967
Department of Agriculture	287,444	320,689
Department of Defense	30,237	34,251
Department of the Interior	73,810	75,529
Department of Labor	3,765	4,815
Department of the Treasury	37	37
Atomic Energy Commission	4,958	4,347
Canal Zone	4,990	7,825
District of Columbia	7,741	7,734
National Science Foundation	4,632	4,463
Total	785,697	866,657

[1] Estimate.

Table 2.—Federal support for current operating expenses of elementary and secondary schools, by agency, 1958–59 and 1959–60

[In thousands of dollars]

Agency and program	1958–59	1959–60 [1]
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	$176,952	$210,109
Support in federally affected areas	138,874	160,500
Improvement in science, mathematics, and foreign language instruction	1,350	4,000
Secondary school guidance, counseling, and testing services	7,400	15,000
Vocational education	28,982	30,235
Gallaudet College	47	56
Education in public health service hospitals	16	17
Training of Indian health personnel	283	301
DEPARTMENT OF AGRICULTURE	287,444	320,689
School lunch program	275,945	305,511
Support from national forest revenue [2]	11,220	14,948
Support from submarginal land revenue [2]	279	230
DEPARTMENT OF DEFENSE	30,237	34,251
Education of dependents of military personnel	30,134	34,150
Public schools in Mariana-Saipan	103	101
DEPARTMENT OF THE INTERIOR	72,763	75,529
Public schools in the Pribilof Islands	51	51
Education of Indians	44,731	46,832
Support from public land revenue [2]	27,346	27,900
Education of dependents of National Park Service employees	38	59
Public schools in the Trust Territory of the Pacific Islands	399	419
Public schools in American Samoa	218	268
DEPARTMENT OF LABOR		
Testing, counseling, and placement interviews for high school seniors	3,765	4,815
DEPARTMENT OF THE TREASURY		
Education of dependents of Coast Guard personnel	37	37
ATOMIC ENERGY COMMISSION		
Public schools at AEC facilities	4,958	4,347
CANAL ZONE		
Operation of public schools	4,228	4,423
DISTRICT OF COLUMBIA		
Operation of public schools [3]	6,448	6,534
NATIONAL SCIENCE FOUNDATION	4,632	4,463
Special projects in science education	3,016	2,527
Summer science training for secondary school students	1,616	1,936
TOTAL, ALL AGENCIES	591,464	665,197

[1] Estimate.
[2] Office of Education, School Finance Section, estimate.
[3] Includes teachers college.

There are only a few programs in the third category—programs set up specifically to contribute to the current operating expenses of elementary and secondary schools. All provide for special services or special programs such as vocational education, which got more than half of the total in both years. Approximately $42 million, or 7 percent of the $591 million for current operating expenses in 1958–59, and $53.5 million, or 8 percent of the total $665 million in 1959–60, went to these programs:

Department of Health, Education, and Welfare
- Improvement in science, mathematics, and foreign language instruction
- Secondary school guidance, counseling, and testing services
- Vocational education

National Science Foundation
- Special projects in science education
- Summer science training for secondary school students

The remaining funds, $11.4 million in 1958–59 and $11.8 million in 1959–60, less than 2 percent of the total for current operating expenses, served a combination of purposes. They were made available in recognition of Federal responsibility for supporting schools and other Government services in specific areas.

For school facilities

Federal agencies spent more than $194 million in school year 1958–59 and an estimated $201 million in 1959–60 on facilities for elementary and secondary schools. These funds were in support of programs aimed at improving facilities for science, mathematics, and foreign language instruction; providing facilities in federally affected areas; and utilizing surplus real and personal property of the Federal Government. Most of these programs were authorized in recognition of special Federal responsibility for financing education in particular areas or served some major purpose other than the support of elementary and secondary schools.

Table 3.—Federal support for the provision of school facilities for elementary and secondary schools, by agency, 1958–59 and 1959–60

[In thousands of dollars]

Agency and Program	1958–59	1959–60[1]
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	$191,131	$196,858
Instruction in science, mathematics, and foreign language[2]	56,000	60,000
School construction in federally affected areas	76,192	73,000
Surplus property utilization—personal[3]	55,253	60,830
Surplus property utilization—real[3]	3,686	3,028
DEPARTMENT OF THE INTERIOR		
Alaska school construction	1,047	.....
CANAL ZONE		
Public school construction	762	3,402
DISTRICT OF COLUMBIA		
Public school construction	1,293	1,200
TOTAL, ALL AGENCIES	194,233	201,460

[1] Estimate.

[2] Includes loans to nonprofit private schools in the amount of $6,720,000 for 1959 and $7,200,000 for 1960.

[3] Office of Education, School Finance Section, estimate.

Ten-year goals: School staffing

The Office of Education has recently published reports of two studies that give some measure of the task facing public education in the years ahead. They are Ten-Year Aims in Education: Staffing and Constructing Elementary and Secondary Public Schools, and Ten-Year Objectives in Education: Higher Education Staffing and Physical Facilities, 1960–61 through 1969–70. The studies, begun more than a year ago at the request of Secretary Flemming, were made by Office staff members in consultation with leaders in education outside the Office. Their purpose is not to determine what responsibility any group or government agency at any level should accept. It is rather to set objectives as a basis of discussion and to provide background information on public school needs and costs of providing for them. Both reports are carefully documented and both describe the methods of making projections and estimates. That part of the first report which deals with aims in staffing is summarized here.

ALMOST EVERYONE will agree that competent teachers are essential to sound education, that both teachers and pupils need favorable conditions to work in and suitable tools to work with. Because our public schools are falling

far short of both essentials, 10-year objectives have been set for school staffing and construction.

Emphasis on these two elements of public education is not meant to imply that others are not important. These two are dealt with first because they call for greater financial commitment by the public than other elements. In time, other educational goals will be set.

School Staffing

The 10-year goal: To have a professionally competent teacher in every elementary and secondary classroom in U.S. public schools by providing salaries that compete with those in other occupations requiring similar education and training and by improving selection procedures and preservice and inservice training.

To meet this demand for qualified teachers schools would have to raise salaries by some 50 percent by 1963–64; to keep teaching competitive with other occupations they would have to make an upward adjustment of about 2 percent a year during the second 5-year period. The 50-percent increase would bring the 1963–64 average annual salary of the instructional staff to $7,439 and that of classroom teachers to $7,216. Over the 10-year period the total cost of salaries at the 1958–59 level would be $82.6 billion; at the proposed increase, $120.5 billion or $37.9 billion more. The average annual increase would cost about $3.8 billion.

The salary increase in the first 5-year period is roughly equivalent to the total increase teachers get in 12 years under the present trend.

The salary increase is not a specific recommendation for any particular school district. Salaries in some districts would have to be raised considerably more than 50 percent and in others, less. The increase represents the national accomplishment necessary to meet the total need, rather than a formula for bringing this accomplishment to pass in each locality. The aims of such a goal can be realized only as individual school jurisdictions accept the objectives and act on them.

The demand.—The cost of achieving the 10-year salary goal is estimated on the basis of teachers needed to care for the growing enrollment, salary level, and salaries in competitive occupations.

These increases should be expected between 1958–59 and 1968–69:

Instructional staff (including classroom teachers, principals, and other professional employees who support instruction): 437,000, or 31.5 percent, from 1,389,000 to 1,826,000.

Classroom teachers: 399,000, or 30.9 percent, from 1,293,000 to 1,692,000.

Secondary teachers, 247,000, or 51.7 percent.

Elementary teachers, 152,000, or 18.7 percent.

The demand for new classroom teachers will average about 200,000 a year over the 10-year period; in the second 5-year period the demand will be slightly higher at the secondary level (up from a yearly average of 110,000 to 115,000) and slightly lower at the elementary level (down from a yearly average of 94,000 to 90,000).

Basis of estimates.—These figures on number of teachers needed assume that present trends in school-age population, percentage of population enrolled in school, and pupil-teacher ratio will continue throughout the period. Bureau of Census projections based on 1955–57 birthrate show steady increases in population:

Age group	*Population in thousands*		*Percent increase*
	1960	*1970*	
Under 5	19,991	24,190	21.0
5–14	36,376	42,982	18.2
15–19	13,406	19,262	43.7
20–24	11,311	17,343	53.3

Between 1958–59 and 1968–69 enrollment in elementary schools will increase by 3.9 million, or 16.2 percent; and in secondary schools, by 5.4 million, or 49.7 percent.

Pupil-teacher ratio in elementary schools will decline from 28.98:1 in 1959–60 to 28.50:1 by 1964–65 and then remain constant; in secondary schools it will decline from 21.77:1 in 1959–60 to 21.50:1 by 1964–65 and then remain constant.

These estimates of pupil-teacher ratio are based on a current-trends model in an effort to get a quantitative picture. Some current trends and cross currents that might affect the pupil-teacher ratio and consequently the number of teachers needed have not been considered because they would be difficult to estimate quantitatively. Among them are the movement of population from rural sections where pupil-teacher ratios are low to urban sections where ratios are high; district reorganization in rural areas resulting in larger school systems; experiments with team teaching and use of teaching aids; addition of new or advanced courses in high school curriculums; and the addition of new programs and services, for example, services for handicapped children. If these trends lead to even a slight lowering of pupil-teacher ratio, they will add to the number of teachers needed and consequently to total expenditures. A 23:1 ratio would raise the total cost by about $600 million; the 20:1 ratio recommended by the Educational Policies Commission would raise the total by $1,880 million.

Staff quality

Any consideration of staffing schools in the years ahead must emphasize quality as well as quantity. In the past decade the qualifications of teachers have been upgraded according to at least one standard—graduation from college. Between 1948–49 and 1958–59 the percentage of elementary teachers who had completed 120 semester hours or more of college work increased from 49.1 to 75.3. In 1956 the median teacher had 4.7 years of college. Even

Statistic of the Month

Library Services in the Public Schools

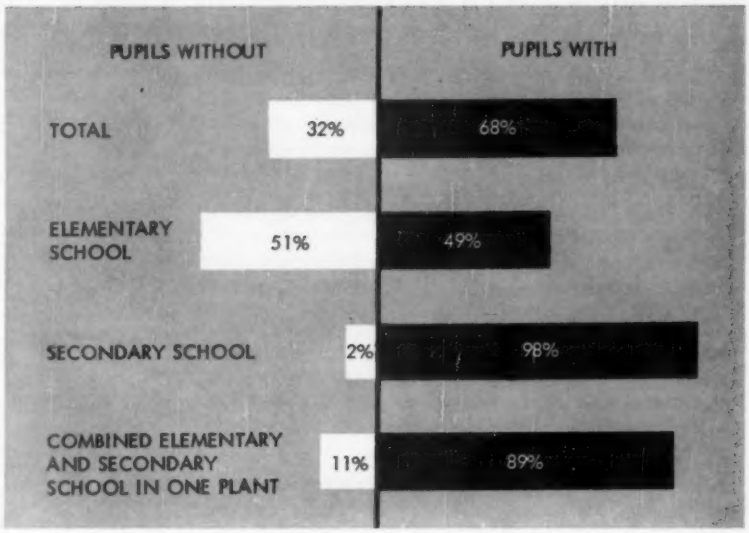
More than 10.6 million pupils in school districts with 150 or more pupils are without the services of a centralized library, that is, a library administered as a unit, usually located in one place in the school building, and staffed and stocked to serve all teachers and pupils. The only service they have—if they have any—is from classroom collections, loan collections, bookmobiles, or a combination of these. Approximately 10 million of these pupils are in separate elementary schools, and approximately 490 thousand are in combined elementary and secondary schools, very likely schools with small secondary departments.

At least some of the children now without good library services may soon have much better service. As small school districts are abolished and small schools are consolidated, they will be in larger schools with centralized libraries.

These facts, along with many others on bookstock, expenditures, number of libraries by type of school and size of district, are reported in Public School Library Statistics, 1958–59, by Mary Helen Mahar and Doris C. Holladay (1960, 15 pages, OE–15020), free from the U.S. Office of Education, Washington 25, D.C.

—EMERY M. FOSTER, *Chief, Research and Surveys Section.*

In both chart and table below: Centralized public library services in school districts enrolling 150 pupils and over, 1958–59



[Office estimates, based on a sample study of 839 of the 15,526 school districts. Percentages are based on unrounded figures]

Type of school	Total number of pupils (thousands)	Pupils with service		Pupils without service	
		Number (thousands)	Percent	Number (thousands)	Percent
Elementary	19,655	9,620	49	10,034	51
Secondary	9,512	9,366	98	146	2
Combined elementary and secondary school in one plant	4,550	4,060	89	490	11
Total	33,716	23,046	68	10,670	32

so, in 1959-60 approximately 99,000 teachers held less than standard certificates as defined by the States in which they taught and large numbers of teachers with standard certificates were not college graduates. In 1956–57, only 73 percent of the beginning teachers held both a bachelor's degree and a standard certificate. It goes without saying that the possession of a bachelor's degree and a standard certificate is no guarantee of competence. But by and large, teachers who meet these standards should be better than those who do not.

Standards in other occupations are also being raised. Furthermore the Department of Labor predicts that in the next 10 years the heaviest demands for manpower will be in occupations requiring the most education and training. This means sharp competition for quality.

Salary comparisons

Several aspects of teaching—educational attainment, length of work year, and predominance of women in teaching—make it difficult to compare salaries in teaching with those in other occupations. These facts on these aspects should be kept in mind in comparing salaries:

Educational attainment: Teachers are among the top 10 percent of the population in educational attainment; profes-

sional and technical groups, of which teachers constitute a large part, average 3.7 more years of schooling than any other group. Compared to other professions teaching is about on a par with engineering and architecture but below medicine and law, which require 6, 8, or more years of higher education.

Length of work year: Teachers work a shorter year than persons in other jobs. To some extent the difference is more apparent than real because many teachers are required to work for a period before school opens and after school closes and others are required to spend part of the summer in further study. But granting that on the whole they work a shorter year, teachers should earn an annual income that supports a professional standard of living.

Predominance of women: Approximately 27 percent of classroom teachers are men and 73 percent women; in secondary schools the percentages are 49 and 51. Men and women do not have comparable occupational opportunities and men usually get the higher paying jobs. Although the principle of equal pay for equal work has been generally accepted in education, the better advantages of men in other fields creates a staffing problem. Teaching should be made attractive to both men and women.

Other things being equal, we would expect occupations requiring high levels of education to pay higher salaries than those requiring less education. Yet study after study shows that salaries of instructional staff compare unfavorably with those in other professions and other occupations.

Salaries of all persons working for wages.—Only 7.2 percent of the men and 6.9 percent of the women 25 years old and over receiving any income in 1949 had 4 years of college (1950 Census figures). In 1949 the average salary of the instructional staff was $2,900; the average of all persons working for wages or salary was $2,850; comparable figures for 1958 were $4,730 and $4,344.

Salaries in professional and semiprofessional occupations.—If the index of classroom teachers is considered as 100, these would be the index figures of other professions and semiprofessions:

Occupation	*Index*	*Year*
Biologists	161	1955
Chemists	175	1951
Economists	192	1952
Engineers	191	1958
Geologists	186	1955
Medical and laboratory technicians	97	1958
Nurses	94	1958
Physicists	187	1955
Psychologists	150	1955
Scientists (grouped)	167	1955
Social agency case workers	109	1957

Salaries in occupations requiring 4 years of college.—A special Census report on occupations other than teaching that require college graduation shows the percentage by which the median income in each exceeded or was less than the median income for the total labor force (full-time workers) in 1949. These are the percentages:

Architects, +108; engineers, +79; veterinarians, +67; natural scientists, +59; editors and reporters, +56; pharmacists, +54; chemists, +54; social scientists, +50; foresters and conservationists, +23; social and welfare workers, +7; librarians, −8; clergymen, −10; and dietitians and nutritionists, −14. If teachers had been included they would have been fifth from the bottom with +19 percent.

Trends in average salaries.—Salaries of instructional staff and classroom teachers have been increasing in recent years in dollars and in purchasing power. At the same time qualifications of teachers have been improving. From 1949 through 1953 average salaries of classroom teachers were below those of all persons working for wages or salaries; in 1959 the average salary of instructional staff was 9.6 percent higher than that of these employees and that of classroom teachers was 6.3 percent higher. Since 1939 the salaries of all persons working for wages have increased more rapidly than those of instructional staff and teachers.

Beginning salaries.—Comparisons of beginning salaries offered to college graduates show that both men and women enter teaching at an economic disadvantage, a fact that must be considered in recruiting.

In 1956–57 an Office of Education survey reported these beginning salaries for teachers with bachelor's degrees and standard certificates:

	Median	*Mean*
Both sexes	$3,525	$3,465
Men	3,600	3,590
Women	3,500	3,410

Compared with teachers, beginning engineers with bachelor's degree only did much better in at least seven fields:

	Median
Chemistry	$4,920
Machinery	4,920
Electrical machinery	5,100
Transportation	5,100
Railroads	4,920
Public utilities	4,800
Consultant work	5,100

A Department of Labor study of starting salaries of women who received bachelor's degrees in 1955 found that teachers with an average salary of $3,197 ranked sixth among 10 groups of college graduates; chemists were top with $3,900; typists, lowest with $2,704.

Differentials for advanced degrees.—School salary schedules usually allow a small differential for teachers holding a master's degree and only slightly more for those holding a doctor's. The following figures show the differentials for beginning teachers in 1956–57:

Educational attainment	Median salary		
	Both sexes	Men	Women
All beginning teachers	$3,500	$3,675	$3,400
Less than a bachelor's degree	2,790	3,000	2,700
Bachelor's degree or more	3,600	3,700	3,600
Bachelor's degree only	3,500	3,600	3,500
More than a bachelor's, no master's	3,750	3,800	3,700
Master's degree or more	4,100	4,200	4,000

In industry studies of median salaries show a much higher differential for both master's and doctor's degrees.

Salary increases and maximums.—The typical schedule in a large school district requires about 12 annual salary steps to reach the maximum for a teacher with the bachelor's degree. At the end of 12 years the maximum is about 50 percent higher than the minimum. In business and industry increases are higher and are continued longer.

Teachers' salary schedules offer little incentive. Salaries have been large enough to attract new teachers but not large enough to encourage teachers to stay in the field. Since raises have generally been given across the board, maximum salaries have not increased as rapidly as minimums. An effort should be made to set up salary schedules in which the maximum salary tends to double the minimum.

Variation among States

In school year 1957–58 there was a difference of $3,300 between the States ranking highest and lowest in average annual salary of instructional staff; in 2 States the average was over $6,000; in 11 States, below $3,500; in one of these, below $3,000.

Annual cost of staff salaries

The term "current expense" covers all school expenditures for all purposes except capital outlay and debt services; it includes expenditures for school administration, plant operation and maintenance, pupil transportation, textbooks and other instructional materials and supplies, and salaries of instructional staff. Of the $10.1 billion total current expenditures for public elementary and secondary education in the 1957–58 school year, $6.3 billion, or 62.1 percent, was for instructional staff. In 1958–59 the total cost of instructional salaries was $6,887 million, up 93.7 percent from the 1949–50 total of $3,555 million. The increase results from steady increases in total instructional staff and in teacher salaries. (Inflation was not considered: all money figures are in 1959 dollars.) If the goals for staffing and salaries are met in the next 10 years, the cost will rise by an additional $8,106 million, or 118 precent—80 percent in the first 5 years and 38 percent in the second 5 years.

Teacher Education

To have a professionally competent teacher in every classroom we must do more than raise salaries. Teaching must in all respects become a profession. As a minimum the teacher should hold a bachelor's degree, meet all requirements for certification, and have the personal and intellectual qualities that make a good teacher.

General agreement on deficiencies in teacher education is not necessary, nor is it necessary to silence the sometimes valuable controversy. What is necessary is to develop a mechanism for cooperative action to remove the deficiencies. Some of the deficiencies frequently identified may be caused by failure to use the rigorous selection procedures that would strain out most of the mediocre candidates; failure to provide the resources necessary for an academic and professional preparation for beginning teachers; failure to apply reasonable standards in appointing teachers; failure to help teachers continue their studies.

To eliminate the deficiencies in teacher education, institutions of higher education, professional associations, and public school systems will find it necessary to work together to sharpen selection procedures, strengthen preservice education, and refine provisions for inservice growth and professional development.

Sharpening selection procedures.—Several recent studies show that teacher education has been accepting too large a proportion of the students who rank below average in academic ability and that as a group students preparing to be teachers consistently fall below students in liberal arts, science, and engineering.

Strengthening preservice programs.—The supply of professionally qualified teachers is insufficient. The number of emergency teachers has increased from 74,815 in 1954–55 to 98,858 in 1959–60, a ratio comparable to the increasing school population. Preservice education must provide enough qualified teachers.

Improving inservice programs.—Inservice education programs have developed so vigorously since World War II that there is a disturbing variation in the kind and quality offered in local districts. Many districts should reexamine the objectives and methods of their programs. The same criticism can be made of advanced study for inservice teachers. Graduate programs have multiplied rapidly, with little exchange and cooperation between institutions and persons responsible for education.

For the improvement of teacher education we suggest that each State establish State councils composed of representatives of teacher education institutions, local districts, and professional associations to work on these problems: Selection of students, provision of scholarships, preservice preparation, accreditation, certification, inservice programs, advanced study, local leadership and working conditions, and area leadership and coordination.

The task of improving teacher selection, preparation, and inservice education that must accompany the salary increase if the staffing aim is to be achieved is primarily one of leadership in mobilizing resources, developing constructive public interest, and expanding cooperative professional action at the occupational level. Although the challenge is not, therefore, chiefly a financial one, it will call for outlays that are considerable, though not as heavy as for salaries. It may be that an expenditure of $1 billion over the 10-year period will be required by the many institutions, professional groups, and governmental and other agencies to be included in this crucial partnership.

Teacher education is primarily a State responsibility; it should be fully assumed, adequately supported, and effectively discharged. But a strong well-coordinated program for improving teacher selection and education requires the joint efforts of all concerned—of the State education agencies, the organized profession, the teacher education institutions, and the local school systems.

The President's program: State-by-State estimates

President Kennedy's message on Federal aid to education (pages 3–6) recommends, in addition to a program for increasing college facilities, more than $2 billion to the States for elementary and secondary schools (for classroom construction and teachers' salaries) and 212,000 scholarships of something like $700 a year for able young people who need financial assistance to go to college. How each State would share in these two programs is shown in the following estimates, made by the Educational Statistics Branch of the Office of Education.

Estimated number of scholarships and amount of money allocated to States under Administration proposal for fiscal years 1962 through 1966

State	1962		Total 1963–66		State	1962		Total 1963–66	
	Scholarships	Amount	Scholarships	Amount		Scholarships	Amount	Scholarships	Amount
Alabama	519	$363,300	3,889	$2,722,300	New Mexico	131	$91,700	984	$688,800
Alaska	15	10,500	111	77,700	New York	2,035	1,424,500	15,268	10,687,600
Arizona	160	112,000	1,197	837,900	North Carolina	715	500,500	5,365	3,755,500
Arkansas	306	214,200	2,292	1,604,400	North Dakota	109	76,300	817	571,900
California	1,898	1,328,600	14,237	9,965,900	Ohio	1,329	930,300	9,968	6,977,600
Colorado	234	163,800	1,754	1,227,800	Oklahoma	390	273,000	2,924	2,046,800
Connecticut	316	221,200	2,367	1,656,900	Oregon	270	189,000	2,023	1,416,100
Delaware	56	39,200	418	292,600	Pennsylvania	1,631	1,141,700	12,233	8,563,100
Florida	543	380,100	4,074	2,851,800	Rhode Island	116	81,200	872	610,400
Georgia	552	386,400	4,139	2,897,300	South Carolina	369	258,300	2,766	1,936,200
Hawaii	109	76,300	817	571,900	South Dakota	111	77,700	835	584,500
Idaho	116	81,200	872	610,400	Tennessee	531	371,700	3,982	2,787,400
Illinois	1,332	932,400	9,996	6,997,200	Texas	1,268	887,600	9,513	6,659,100
Indiana	681	476,700	5,105	3,573,500	Utah	150	105,000	1,123	786,100
Iowa	449	314,300	3,369	2,358,300	Vermont	66	46,200	492	344,400
Kansas	328	229,600	2,460	1,722,000	Virginia	522	365,400	3,917	2,741,900
Kentucky	458	320,600	3,434	2,403,800	Washington	405	283,500	3,035	2,124,500
Louisiana	462	323,400	3,462	2,423,400	West Virginia	337	235,900	2,524	1,766,800
Maine	141	98,700	1,058	740,600	Wisconsin	608	425,600	4,557	3,189,900
Maryland	387	270,900	2,905	2,033,500	Wyoming	52	36,400	390	273,000
Massachusetts	688	481,600	5,160	3,612,000	District of Columbia	79	55,300	594	415,800
Michigan	1,124	786,800	8,437	5,905,900	Canal Zone, Guam, Puerto Rico, Virgin Islands	250	175,000	1,875	1,312,500
Minnesota	551	385,700	4,130	2,891,000					
Mississippi	345	241,500	2,589	1,812,300					
Missouri	590	413,000	4,427	3,098,900					
Montana	109	76,300	817	571,900					
Nebraska	219	153,300	1,643	1,150,100					
Nevada	33	23,100	251	175,700					
New Hampshire	88	61,600	659	461,300					
New Jersey	717	501,900	5,374	3,761,800	Total	25,000	17,500,000	187,500	131,250,000

The number of scholarships for each State is estimated on the basis of its high school graduates of 1957–58 and its 1958 population aged 14 to 18; the amount of money is estimated on the basis of a $700 average for each scholarship.

Estimated allotments to States under proposed Administration School Assistance Act of 1961: Amount per State and amount per pupil in average daily attendance in public schools, by fiscal years, 1961 through 1963

State	1961		1962		1963	
	Per State	Per pupil in A.D.A.	Per State	Per pupil in A.D.A.	Per State	Per pupil in A.D.A.
Alabama	$19,691,692	$27.27	$22,583,245	$31.06	$25,327,454	$34.65
Alaska	555,000	15.00	645,000	15.00	750,000	15.00
Arizona	6,260,276	22.60	7,619,234	25.74	9,043,884	28.71
Arkansas	10,538,844	28.18	11,874,871	32.09	13,101,790	35.80
California	52,733,321	16.82	64,313,909	19.16	76,414,133	21.37
Colorado	7,157,176	19.83	8,603,311	22.58	10,074,516	25.19
Connecticut	6,600,000	15.00	6,960,000	15.00	7,305,000	15.00
Delaware	1,155,000	15.00	1,215,000	15.00	1,290,000	15.00
Florida	19,120,968	20.65	23,494,752	23.52	28,120,464	26.23
Georgia	22,014,247	26.05	25,488,608	29.67	28,859,731	33.10
Hawaii	3,121,256	22.95	3,711,812	26.14	4,285,832	29.16
Idaho	3,760,723	24.91	4,339,997	28.37	4,872,393	31.64
Illinois	23,310,000	15.00	24,060,000	15.00	24,780,000	15.00
Indiana	16,956,529	18.51	19,671,096	21.08	22,317,020	23.52
Iowa	11,280,457	21.20	13,016,980	24.15	14,680,475	26.94
Kansas	9,445,918	21.97	11,033,685	25.02	12,613,723	27.91
Kentucky	14,583,887	24.97	16,638,833	28.44	18,558,615	31.72
Louisiana	15,034,329	23.56	17,525,995	26.84	19,997,176	29.94
Maine	4,125,926	22.30	4,750,050	25.40	5,326,446	28.33
Maryland	8,976,670	16.09	10,773,691	18.32	12,629,855	20.44
Massachusetts	11,790,000	15.00	12,090,000	15.00	13,273,515	16.09
Michigan	27,070,253	17.67	32,079,528	20.13	37,150,155	22.45
Minnesota	13,062,937	20.28	15,270,830	23.10	17,445,053	25.77
Mississippi	14,687,634	29.67	16,255,415	33.80	17,565,544	37.69
Missouri	12,246,808	17.03	14,064,931	19.40	15,795,929	21.64
Montana	2,919,012	20.85	3,419,626	23.75	3,920,101	26.49
Nebraska	5,321,259	20.00	6,129,038	22.78	6,912,416	25.41
Nevada	952,274	15.87	1,174,979	18.08	1,411,359	20.16
New Hampshire	1,734,218	17.70	2,035,633	20.15	2,337,963	22.48
New Jersey	14,400,000	15.00	14,985,000	15.00	15,555,000	15.00
New Mexico	5,275,194	24.88	6,263,277	28.34	7,302,037	31.61
New York	37,650,000	15.00	38,715,000	15.00	39,735,000	15.00
North Carolina	27,905,485	27.25	32,093,440	31.04	36,142,562	34.62
North Dakota	3,100,067	24.60	3,558,869	28.02	3,969,490	31.26
Ohio	28,735,988	16.30	33,879,936	18.56	39,031,368	20.71
Oklahoma	11,951,838	24.39	13,723,715	27.78	15,400,110	30.99
Oregon	7,095,843	20.10	8,356,592	22.89	9,601,681	25.54
Pennsylvania	26,880,000	15.00	30,986,280	17.06	34,942,097	19.03
Rhode Island	1,800,000	15.00	1,845,000	15.00	1,974,787	15.67
South Carolina	15,228,456	28.25	17,537,616	32.18	19,776,441	35.89
South Dakota	3,262,057	23.81	3,796,681	27.12	4,295,246	30.25
Tennessee	19,542,885	26.13	22,526,242	29.76	25,390,845	33.19
Texas	40,262,707	21.40	47,368,850	24.38	54,438,623	27.19
Utah	5,778,627	25.34	6,725,922	28.87	7,662,943	32.20
Vermont	1,459,990	21.16	1,638,770	24.10	1,827,851	26.88
Virginia	17,846,093	22.88	20,821,009	26.06	23,746,498	29.07
Washington	11,408,373	19.67	13,486,454	22.40	15,567,293	24.99
West Virginia	10,658,865	25.56	12,110,817	29.11	13,443,253	32.47
Wisconsin	11,615,012	17.63	13,630,448	20.07	15,650,932	22.39
Wyoming	1,541,357	21.11	1,803,631	24.05	2,065,380	26.82
District of Columbia	1,620,000	15.00	1,620,000	15.00	1,635,000	15.00
Guam	363,080	27.93	445,341	31.81	567,685	35.48
Puerto Rico	14,243,895	27.93	17,050,201	31.81	19,904,454	35.48
Virgin Islands	167,575	27.93	190,860	31.81	212,882	35.48
Total	666,000,000	19.75	766,000,000	22.04	866,000,000	24.22

Brief. . . . . EDUCATION AND GOVERNMENT Reports . . . . . .

NSF summer science programs

This summer will be a busy time for over 9,000 superior high school students. Through the National Science Foundation's training programs for high ability students they will be pursuing science and mathematics programs over and beyond those their schools offer. NSF has awarded 180 grants, totaling $2 million, for this summer's programs, to 158 colleges, universities, and nonprofit research organizations in 43 States, the District of Columbia, and Puerto Rico. These institutions are now developing the programs; their faculties will provide the instruction. There will be three types of programs:

Lectures, quizzes, supervised study periods, laboratory work, and field trips centered on one or more areas of science.

Research experience—work on a project under the guidance of experienced scientists.

New and experimental work under the advanced cooperative college-school science program.—Included for the first time this year, this program will offer advanced training to about 2,700 scientifically talented students and 50 secondary teachers. The object is to help develop more rigorous curriculums in secondary school science and mathematics.

Students in the 10th, 11th, and 12th grades are eligible; they will be chosen by the sponsoring institutions on the basis of scholastic ability, scientific motivation, and the completion of specified high school courses in science and mathematics. Students will apply to the sponsoring institution they wish to attend, not to NSF. A list of the institutions is available from the National Science Foundation, 1951 Constitution Avenue NW., Washington 25, D.C. Ask for release NSF–61–107.

Training opportunities for women

To encourage more women and girls to seek formal training for a job and more employers and vocational educators to increase training opportunities in fields where women trainees are still scarce is one of the major purposes of the Department of Labor's *Job Opportunities for Women and Girls.*

The publication describes the growing importance of job training, major types of training facilities, and training opportunities in specific fields. It reports, for instance, on the type of training women and girls can obtain at public trade and high schools, junior and community colleges, and private business, trade, and technical schools. Its third section, "Training Opportunities in Specific Fields," describes training available for such occupations as office work, sales work, industrial work, nursing and health services, and housekeeping and food services. At the end of the book is a list of State offices that can furnish information on courses offered in specific areas.

Job Opportunities is sold for 30 cents by the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Understanding the gang

For the child between the ages of 10 and 15, belonging to a gang is one of the most important things in life. For his parents, the gang is often the source of much anxiety.

In the hope of turning the anxiety into a more constructive state of mind, the Children's Bureau of the Department of Health, Education, and Welfare has written *Your Children and Their Gangs.* The booklet explains the meaning of gangs, how they help children grow, the forms they take, the hazards they present and how to avoid them, and the forms of parent interest that will make gang activities both useful and pleasant.

The authors are Edith G. Neisser, secretary of the Ittleson Family Foundation of New York City and a consultant to the Mental Health Materials Center, and Nina Ridenour, a writer of parent and child development material. The publication is sold for 20 cents by the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Ask for Children's Bureau publication No. 384–1960.

Dictionary of degrees

Gone with crinolines and hoop skirts are the degrees some women's colleges once conferred on their graduates, such as Maid of Arts and Sister of Arts. Gone, too, are many other degrees—about 800 in all—but U.S.

colleges and universities still confer over 1,600 different academic degrees. For these they use almost 2,600 abbreviations—more than a dozen for some degrees. They have conferred at least 235 different honorary degrees, though they use only half that many now.

These are some of the principal findings of the recent Office of Education survey of earned and honorary degrees conferred by institutions of higher education in the United States. From the study of the replies to 2,000 questionnaires sent to the institutions listed in *Part 3* of the *Education Directory, 1959–60, Higher Education*, the Office has prepared the bulletin *Academic Degrees*. This "dictionary of degrees" has chapters on types of degrees, types of institutions, degrees for women, honorary degrees, spurious degrees—those conferred by "degree mills," degrees classified by field, and degrees and abbreviations in alphabetical order. It contains an index, tables, and graphs.

Academic Degrees (OE–54008), 325 pages, is priced at $1 at the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Surplus property

During October, November, and December 1960 the Department of Health, Education, and Welfare made available $77,278,690 worth of surplus property to the States for educational, public health, and civil defense purposes. Real property accounted for $1,969,750; personal property, $75,308,940. HEW's Secretary Ribicoff announced the total on February 20 in making the department's quarterly report to Congress.

This property is distributed under the provisions of the Federal Property and Administrative Services Act of 1949. It goes, through State and local agencies, to educational and public health agencies of State and local governments, to civil defense organizations, and to eligible nonprofit health and educational institutions exempt from Federal taxes.

Foreign language film

"To Speak With Friends," a film report on the teaching of modern foreign languages is now available for rental or purchase. It demonstrates advanced instructional practices in both elementary and secondary classrooms using language laboratories, television, motion pictures, recordings, slides, and other special audiovisual facilities to help the student understand and speak a new language. It runs 28 minutes and has television clearance. It was produced by the National Educational Television and Radio Center under a title VII, National Defense Education Act, contract.

Many film libraries rent "To Speak With Friends." If your local library has no information on it, the Educational Media Branch, U.S. Office of Education, Washington 25, D.C., will gladly answer questions. United World Films, 1445 Park Avenue, New York 29, N.Y., sells black and white 16-mm sound prints for $55.52, with a 10-percent discount to nonprofit organizations, f.o.b. New York.

Civil War material

Seventeen publications available from the Government Printing Office tell the stories of the most important events of the American Civil War, from Fort Sumter to Appomattox Court House. Written by authorities in Civil War history, these booklets and folders describe shrines and memorials as well as the battles they commemorate. Two are general; 14 cover specific battles and battlegrounds. One is a reproduction of a famous painting. Whatever his age, the student of the "most fascinating war in history," will find these factual, well-illustrated publications useful to him, particularly in these Civil War Centennial years, 1961–65. The list follows.

Facts About the Civil War, No. Y 3.C 49, 20 cents.
The American Civil War, a Selected Reference List, No. LC 2.2:C49/5, 25 cents.
Gettysburg, No. I 29.58:9, 25 cents.
Shiloh, No. I 29.58:10, 25 cents.
Fort Sumter, I 29.58:12, 25 cents.
Petersburg, I 29.58:13/2, 25 cents.
Manassas, I 29.58:15/2, 25 cents.
Fort Pulaski, I 29.58:18, 25 cents.
Vicksburg, I 29.58:21, 25 cents.
Chickamauga and Chattanooga, I 29.58:25, 25 cents.
Antietam, I 29.58:31, 25 cents.
Appomattox Court House, No. I 29.21, Ap/6/2/958, 10 cents.
Kennesaw Mountain National Battlefield Park and the Atlanta Campaign, No. I 29.21, K 39/4/956, 10 cents.
Richmond, No. I 29.21, R 41/2/958, 5 cents.
Fredericksburg and Spotsylvania County, No. I 29.21, F 87/5/957, 15 cents.
Harpers Ferry, No. I 29.21, H 23/957, 5 cents.
First at Vicksburg, No. D 101.35:21–41/2 (a full color reproduction of the original painting, 20 by 24 inches, suitable for framing), 20 cents.

To order, send check or money order to the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Include titles and catalog numbers.

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Advance Planning to Meet Higher Education Needs, Recent State Studies 1956–59.

By S. V. Martorana and James C. Messersmith, 1960, 33 pp., 30 cents (OE–53007).

Education for Africans in Tanganyika, a Preliminary Survey.

By Betty George, 1960, 97 pp., 40 cents (OE–14039).

Library Statistics of Colleges and Universities, 1959–60, Part 1: Institutional Data.

By John Carson Rather and Doris C. Holladay, 1961, 79 pp., 50 cents (OE–15023).

Opening (Fall) Enrollment in Higher Education, 1960: Institutional Data.

By Educational Statistics Branch, 1960, 35 pp., 30 cents (OE–54003–60).

Quest for Quality, New Dimensions in Higher Education, No. 7.

By Samuel Baskin, 1960, 18 pp., 15 cents (OE–50016).

Research and Studies, Language Development Program, Title VI—National Defense Education Act of 1958.

Report on the first two years, 1960, 30 pp., 30 cents (OE–12011).

Student Financial Aid in Higher Education, An Annotated Bibliography.

By Walter C. Eells and Ernest V. Hollis, 1960, 87 pp., 35 cents (OE–53006).

FREE

Request single copies from Publications Inquiry Unit, U.S. Office of Education, Washington 25, D.C. Please include publication number. Supply is limited.

Bond Sales for Public School Purposes, July 1, 1959–June 30, 1960.

By Clayton D. Hutchins and Elmer C. Deering, January 1961, 11 pp. (OE–22009).

Cooperative Research Program Newsletter, No. 4.

William R. Carriker, editor, January 1961, 4 pp. (OE–12001–4).

Foreign Languages in Soviet Schools.

By Kenneth W. Mildenberger, Marjorie C. Johnston, and Gordon H. Fairbanks, reprint from *School Life*, October 1960, 4 pp. (OE–14056).

Industrial Arts Education: A Call to the Profession.

By Marshall L. Schmitt, reprinted from *School Life*, October 1960, 4 pp. (OE–33017).

Modern Foreign Language Fellowships, Title VI, National Defense Education Act of 1958, Language Development Program.

Report on the first 2 years, 12 pp. (OE–55015).

National Defense Graduate Fellowships, Approved Programs, 1961–62.

Title IV, National Defense Education Act, programs for graduate students, 1961, 25 pp. (OE–55017).

National Defense Counseling and Guidance Training Institutes, Summer 1961 and Academic Year 1961–62.

Announcement, 1961, 15 pp. (OE–25015).

National Defense Language Institutes Program, Summer 1961 and Academic Year 1961–62.

Announcement, 1961, 14 pp. (OE–27011).

The National Defense Student Loan Program.

A leaflet, reprinted 1960, 5 pp. (OE–55002A).

The New Educational Media Program Authorized by Title VII of the National Defense Education Act of 1958.

A leaflet, revised 1961, 6 pp.

Sources of Information Concerning Teaching Positions Outside the Continental Limits of the United States.

A partial list, 2 pp. (OE–14060).

Statistics of County and Regional Library Systems Serving Populations of 50,000 or More: Fiscal Year 1959.

By Rose Vainstein and Doris C. Holladay, October 1960, 12 pp. (OE–15017).

Statistics of County and Regional Library Systems Serving Populations of 35,000 to 49,999: Fiscal Year 1959.

By Rose Vainstein and Doris C. Holladay, December 1960, 8 pp. (OE–15018).

Textbooks—Elementary School, *Keep Tab on the Lab*, Vol. II, No. 6, *Science Books*.

By Lois Belfield Watt and Herbert F. Steeper, November 1, 1960, 11 pp. (OE–14031–6).

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